Website to aid students in the SOC doing the year in industry degree programme

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Signature (of candidate)_____

SUMMARY

The School of Computing (SOC) within the University of Leeds provides students with an opportunity to experience a year in industry as part of their degree. Students are expected to find their own placement during their second academic year and then conduct their placement between their 2nd and 3rd year. The objective of this project was to produce a website to cater for the needs of students who go through the industrial placement process. The minimum requirements for this website were that it should contain:

- All placement information.
- News and schedule information.
- Online placement agreement form.
- A method for students to communicate (E.g. message forum).
- Help and advice on writing CV's and attending interviews.
- Past placement evaluations.
- Facilities for feedback.
- Database driven web pages for placement opportunities.
- Maintainability so that the website could be looked after once I left.

In addition to the creation of a website it was hoped that this project would help to provide a better structure to the industrial placement scheme. Research into the industrial placement degree programme was carried out. As a result, analysis of this research provided the ability for recommendations to be made to the SOC with a hope to make effective improvements to the current industrial placement structure.

The aims and objectives of this project were successfully completed and implemented. The placement website was created using PHP and a MySQL database. It was developed and tested on the School's internal web server and can be found at:

www.csdb.leeds.ac.uk/home.php

It is hope that the website can now be moved to placement web server and made available for students in the SOC to use.

ACKNOWLEDGEMENTS

I would like to acknowledge all the people who have helped and supported me through this project.

First and foremost my gratitude goes to my supervisor Dr John Stell for his invaluable support and advice throughout my whole project. For keeping me calm and providing me with guidance and patience when necessary. Thank you.

To all members of staff at the School of Computing. In particular Shaheen Bibi for her invaluable help on the placement process, Mandy Schiffrin for her help and guidance on the placement website and John Ainsworth for his help on the database design.

I would also like to thank all the students who have provided me with ideas and suggestions on how to improve the service offered by the school. Your response was invaluable; I hope this project does you justice.

I include a special word of appreciation to my friends and family for their encouragement, support and patience through this whole process. In particular Joanne, Laura and Kathryn, I couldn't have done it without you.

DEDICATION

This project is dedicated to my family, in particular my mother and father for being the best parents I could wish for.

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1. INTRODUCTION

1.1 The Need

1.1.1 Industrial Placements

The School of Computing (SOC) within the University of Leeds provides students with an option to extend their degree programme to include a year in industry. Students are responsible for finding an industrial placement in their third year, before coming back to University to finish their degree. Placements must last a minimum of 9 months and must have relevance to the student's academic degree. Once a student has completed the 4-year programme, their qualification will recognise their placement and they will graduate with a certification in industry (e.g. Bsc Computer Science with industry).

1.1.2 The benefits

Having undertaken a year in industry myself, I have personally experiences the benefits of completing a placement. I believe that my year out gave me invaluable experiences and has allowed me to grow and perform better in my final year at University. Aside from the financial benefits, I came back to University with a fresh mind and a determination that I had never felt before. Having been given a taste of the 'real world' I felt that my career had a direction and I began to see my time at University in a different light. I found I had an ability to manage time more efficiently and with greater ease. Since my experience in the work place, the theory that I have learnt at University has had greater relevance, which in turn aided my learning process.

Research within the school has shown that there are numerous benefits from experiencing a year in industry. In general, students who have completed a placement year do significantly better in their final year than students who have not been on placement.

"*Placement students show a huge improvement over the last two academic years whereas the non-placement students do make an improvement but not in the same amounts as their colleagues"* Jane Dickinson (final year project 2000 p. 46).

Aside from doing better in their final year, the benefits of doing a placement can be summarised as follows:

- Gaining work experience.
- Taking a break from University.

- Paid employment.
- Gaining contacts in the work place.
- Exploring individual career choices.
- Practice for finding a permanent job.
- Improve chances of getting a job when you graduate.
- Opportunity to gain LCGI qualification.

On a more personal level, students' attitudes to work change and they generally become more focused in their degree, with a better perspective on what they are working towards.
"*…it's amazing how you go to University for 2 years without really understanding what you are working towards. Only now, coming back to University after my placement year do I appreciate what my time here is all about."* (Anon 2001)

The year in industry does not only benefit the students, but also the University. Students who have been on placement are more likely to get a job at the end of their degree. Thus, the more students who go into a job when they graduate the better this will reflect on the University.

1.1.3 The Problem

If there are so many benefits, why is it that the majority of students decide not to opt for the year in industry degree programme? Around 20% of the single honour students go out on placement.

There are two main areas where problems exist in the current industrial placement scheme. The first is the lack of assistance provided by the school to help students find a placement. The second is the minimal amount of contact provided to the student while out on placement. Further investigations have been performed into these problems, and they are discussed fully in chapter 3.

1.1.3.1 Finding a placement

Currently there exists a sudden drop in the number of students who at first seem interested in the industrial placement scheme, compared with the number who actually go out on placement. This is a major indicator of inadequacies of the current placement programme offered by the School of Computing.

Until recently the SOC provided little in the way of resources for students seeking industrial placements. With the exception of occasional placement advertisements on the school's newsgroup and placement board, the school left it up to the individual to find their own placement. Improvements are currently underway, and this years students have been provided with a website containing basic placement information. A small amount of guidance is provided at the beginning of the 1st semester of the student's second year, with advice on looking for placements and writing CV's. However, many students feel this is not enough.

"I feel let down by the school (of computing). I know students from other universities that offer the placement year programme and they have been given so much more help in finding placements compared to us. " (Anon 2002)

Of course the answer is not to 'spoon feed' the students, but rather find a middle ground that allows the students independence in finding a placement while giving them a greater degree of help.

1.1.3.2 Out on Placement

Contact between the students and the school during the placement year is minimal although currently under review within the school. Last year all communication was performed via e-mail, post and on some occasion telephone. There does exist a placement newsgroup, however the majority of corporate networks are insulated from the Internet by a firewall and thus many students are unable to access this facility (section 4.5.2). Students are left to their own devices while out on placement and any contact that does occur is either initiated by the student or is an administrative task.

There appears to be a widespread feeling of discontentment over the lack of communication that students receive during their placement.

" I felt isolated from the University while I was on placement. I was given no information on the activities that took place in the school and received very little in the way of contact. A simple e-mail to ask how my placement was going would have been nice" (Anon 2001)

During this year some students have been/will be visited (approx. 1/3 to 1/2 of students) during the February to July period.

1.2 The Aims and Requirements

1.2.1 Project Aims

The aim of this project is to develop a system to assist students in the process of finding a placement and to support them whilst out on placement. This project will centre on a database driven website providing placement opportunities, advice for students, facilities for feedback and communication between students. This system will aim to assist students with all or almost all aspects of the placement process.

1.2.2 Minimum Requirements

This project's main minimum requirement is to build a basic maintainable database driven website that will aid the students in SOC who are doing the year in industry degree programme. At a minimum the website should include:

- All placement information.
- News and schedule information.
- Online placement agreement form.
- A method for students to communicate (E.g. message forum).
- Help and advice on writing CV's and attending interviews.
- Past placement evaluations.
- Facilities for feedback.
- Database driven web pages for placement opportunities.
- Maintainability so that the website can be looked after once I leave.

In addition to the website it was hoped that this project would help provide a better structure to the industrial placement scheme. Research into the industrial placement degree programme has taken place. As a result, analysis of this research will hopefully aid the department to make effective improvements to the current industrial placement structure.

1.3 System Development

In order to carry out this project successfully it was important that an outline of the different development stages was outlined and the timescale decided. These stages are summarised as follows:

- **Planning**: Includes investigating project feasibility and data retrieval methods, as well as setting out project's minimum aims and requirements.
- **Initial Data Collections**: Investigating the environment and structure of the industrial placement scheme. Gaining user requirements and an appreciation of the problems with the current industrial placement process.
- **Situation Evaluation**: Analysing all data received and refining project definition.
- **System Specification**: Dealing with interface, database and hardware/software issues.
- **Implementation of solution**: Designing, implementing, testing, documenting and evaluating the website.
- **Conclusion and write up**: Evaluating project against initial objectives and writing up project report.

A break down of the project schedule including a graphical representation can be found in appendix B.

1.4 The Deliverables

- Project Report
- Database Driven Website including databases
- User Manual

1.5 Scope of Project

The project's problem owners situate across a range of different people within the SOC:

- Those thinking about doing a year in industry
- Those on a year in industry
- The placement tutor and secretary

Due to the given time constraints, it was impossible to meet the needs of all the potential users within one project. It was therefore the intention of this project to centre on the students' needs. It provides the students with all the necessary information for the placement degree programme, facilities for finding placements and a method for communication.

Given the period of development and time constraints, it was impossible to evaluate the placement website in use by actual placement students. Thus user testing was not carried out in full.

1.6 Structure of Report

The remainder of this report will be split up into the following chapters:

Chapter 2: BACKGROUND
Contains research into industrial placements within the School of Computing. Discusses current resources available to students and relevant past projects.

Chapter 3: RESEARCHING USER REQUIREMENTS
Discusses all user research that has been carried out for this project. Providing an analysis of interviews and questionnaires.

Chapter 4: REQUIREMENTS ANALYSIS
Sets out the requirements for the website. Taking into consideration current resources and the users of the system.

Chapter 5: DESIGN
Details the design of the website and the underlying database. Including issues dealing with security, maintenance, human computer interaction and selection of software.

Chapter 6: IMPLEMENTATION
Discusses the development of the website, user manual and problems encountered during the implementation.

Chapter 7: EVALUATION
Deals with the testing and evaluation of the website and setting out a scope for future work.

Chapter 8: CONCLUSION
Draws a conclusion on the whole project, reviewing the projects achievements against initial objectives.

In addition, the appendices contain additional information including the website user manual, questionnaire and interview write-ups.

2. BACKGROUND

Probably the largest part of this project's research took place during my own experience of the industrial placement degree programme. Having been through the process myself I was able to get an inside view from my problem owners perspective. It was due to these experiences that I felt work could and needed to be done in this area. However, my experiences were my own and other students who had been through the process may not have shared them. It is for this reason that the background research of this project took two different directions.

- The first of these, investigating the environment in which the system needed to fit into. The structure of the current industrial placement scheme and the administrative task carried out by the school. Most importantly the functionality of the schools current website, so that the final solution would be able to integrate well within the current infrastructure.
- The second area was gaining user requirements, finding out what the students would find valuable from such a system. Each of these areas will be discussed separately with justification given for the methods of investigation chosen and the results of such investigation.

This chapter will concentrate on the environment in which this system needs to fit into, with the next chapter focusing on the user requirements.

2.1 Industrial Placement Structure from a student's perspective

Currently the industrial placement process begins at the start of student's second academic year. Around October an initial placement meeting is held detailing the basic structure of the industrial placement scheme. During this meeting students are provided with a few short presentations from former placement students and given information on the next steps they should take. Throughout the next couple of months students are advised to put together their CV and begin applying to companies. Help in writing CV's is provided to students in the form of workshops from the University's Career Service. This year saw only one workshop being offered to the School of Computing, with an attendance of only 8 students.

Any job advertisements received by the school are added to local.placements.vacancies newsgroup, the current industrial placement website and the placement notice board in the

long room. There are no deadlines enforced for students seeking placements, they have until the next academic year to find their placement. The only thing they need to do is transfer to the 4-year degree to include the industrial placement scheme. This needs to be done before Christmas of their second academic year if they wish their LEA to process the change in time.

Once a student has found a placement they are asked to fill in a placement agreement form informing the school of their placement details. This then has to be returned to the Placement Secretary (Shaheen Bibi). Placements can last from 9 to 18 months and take place between the completion of the student's second academic year and the beginning of their final academic year. During the beginning of the student's placement they are asked to return a health and safety form to the placement secretary for legal reasons. Registration for the student in their year out has currently changed, and will now take place before the student leaves University in their second year.

This year has seen the introduction of visits to students on placements, which take place in the months between February and July. Along side this change, students will now be assessed on the progress of their placement. This may include writing progress reports, keeping a logbook, writing a final report, performing a presentation or providing a reference for their company.

2.2 Industrial Placement Structure from the School's Perspective

2.2.1 Placement Tutor

To better acquaint myself with the structure of the placement process my investigations lead me to interviews with relevant members of staff. The first port of call being Dr John Stell, the industrial placements tutor. Due to John being my supervisor, we found no need to carry out any formal interview. Research was carried out by asking any necessary questions during project meetings and via e-mail. As John only recently became the placement tutor there were still some areas that he was not fully experienced with. In an aid to improve the current system, he was already in the process of doing a review of the facilities offered by the school. It was important for me to gain an understanding of his intended improvements. I found that areas of refinement existed within the assessment of the year in industry and the University's involvement during the year out. As these changes were not finalised before my implementation they could not be integrated into the design of the system. If these changes do go ahead, a possible improvement to the placement website would be to include facilities for them.

2.2.2 Placement Secretary

To better understand the structure of the industrial placement process an interview was performed with Shaheen Bibi, the placement secretary. It is her job to perform all administrative tasks for the process, advertise the placement opportunities and contact the students out on placement with any necessary information. This interview provided information about the methods and tasks involved in a student going on placement. The details held for each student and the administrative tasks involved. Currently the school holds an Access table containing all placement details for each student currently on placement and an Access table holding past placement details (e.g. company's contact address). The past placement table is made available to students if they wish to browse through it, however it has become vastly out of date and is in need of a major refresh if it is to be useful to the students. Discussions with both Shaheen and John resulted in requests for a facility to update the past placement table with new company details. A front end to this table was also recommended in order to help students query its contents.

It was also suggested that a database of placement opportunities should be created. With the intentions that Shaheen could simply update the database with any new placement opportunity she receives. The database would then be available on line for any student that wishes to see it.

Currently all students that decide to do a year in industry must fill in both a project agreement form and a health and safety form. However, problems have arisen in this area as students leave the University before they have found a placement and therefore have not informed the University of their whereabouts.

"We currently have some students out on placement, but we don't know where they are as they must have found their placement after they left University and therefore not filled in a placement agreement form." Shaheen Bibi, Placement Secretary, October 2001

Shaheen agreed that allowing these forms to be available online for submission could hopefully ease this problem.

Organisation seemed minimal and there seemed a large amount of room for improvement. Shaheen welcomed any help in this area and made valuable suggestions toward possible solutions.

2.2.3 SIS

The next interview took place with Jonathan Ainsworth, the co-ordinator of SIS. SIS is the schools internal database driven website holding all information on students. Discussions on the functionality of SIS were discussed and the possible methods of implementation of the placement website proposed. There is currently a migration of the DBMS behind SIS to PostgreSQL and thus it was suggested that a possible implementation of my database would also use PostgreSQL. Jonathan however stated that this was not essential as the website's underlying database would not hold any student details and therefore not need to interact with SIS. The placement website would therefore be considered a 'stand alone' system.

In order to gain a better understanding of the *current* structure of the industrial placement scheme, all activities, presentations and workshops that have been available for the second years wishing to do industrial placements have been attended. This has been a valuable experience and has provided a number of contacts that were used during the development of the placement website. I also provided second year students with a short presentation from myself during this year's initial placement meeting, in a hope to inspire and motivate them to take the industrial placement year.

2.3 Relevant Projects

1. *Development of a Website for Industrial Placement Seekers* (Michele k. Uhuaba Msc Project 1998/9)

   Michele successfully created an industrial placement website for students in the School of Computing, however this never got used. When Michele's project was due to come in to use there was a change of placement tutor (from Clive Souter to Martyn Clark), the new placement tutor decided not to use the website. The website has since been found and evaluated to see whether it is still adequate. Unfortunately, the website is not using the software requested by the current Placement tutor, nor does it contain any user documentation. This makes installation and maintenance of this website extremely difficult and therefore not feasible.

2. *Development of a WWW Based Learning Log for Placement Students* (Adrian Spender undergraduate project 1997/8)

   Adrian successfully developed a WWW based learning log that assists placement students in recording and reflecting their activities and experiences while out on

placement. This was specifically designed for the LCGI qualification discussed in section 4.2.1.

3. *An Evaluation and Enhancement of the WWW Based Learning Log for Placement Students* (Peining Ma undergraduate project 1998/9)
   During the next academic year Peining enhanced the WWW based learning log initially created by Adrian Spender. A paper copy of this learning log is currently the version used by students who wish to log their experiences of their placement or apply for the LCGI award.

4. *The Influences and Benefits of Industrial Placements* (Jane Dickson undergraduate project 1999/2000)
   Jane Dickson conducted a large amount of research on the benefits and influences of undertaking an Industrial Placement. Her research found that industrial placements are extremely beneficial and in most cases provide the student with substantial improvement in their final year results.

3. RESEARCHING USER REQUIREMENTS

3.1 Target Audience

As the placement website is primarily for the needs of an industrial placement student, it is important to identify what these needs are. In order to gain user requirements I decided to investigate a number of different target audiences that could hopefully provide me with suggestions and ideas. I divided my target audience falling into four different categories:

- Students within the SOC currently out on placement.
- Students within the SOC who have returned from placement.
- Students within the SOC who initially wanted to do and industrial placement but never did.
- Students from different Universities who have done / are doing an Industrial placement.

I also considered gaining information from students within the SOC looking for Industrial placements. However this was not feasible because research took place in the beginning of the academic year, before these students were familiar with the placement process. As an alternative, a register of all students that attended the initial placement meeting was taken so that their progress could be monitored and future contact for the evaluation of the placement website could be made.

After discussing possible research methods this chapter will look at each target audience in turn and summarise the results of the research.

3.2 Possible Research Methods

I performed extensive research into the best methods of data in order to extract as many responsive ideas and suggestions as possible. The following research methods were considered:

3.2.1 Questionnaires

Questionnaires are an inexpensive way to gather data from a potentially large number of respondents. Often they are the only feasible way to reach a large number of reviewers that are geographically widespread. While they are inexpensive in cost it is just the alternative in time. Questionnaires are a timely process and require a great amount of design, refinement

and interpretation if they are to be of maximum use. Attention must be given to the format of the questions used (open or closed format), the style in which they are written (unbiased and not misleading) and how well they lead to possible analysis. Another problem with the use of a questionnaire is that it is difficult to ask complex questions, as subjects are unlikely to be willing to spend a long time filling them in.

3.2.2 Interviews

In contrast, interviews allow for more complex questions to be discussed. You are able to build a rapport with the respondent and often observe as well as listen to what they have to say. It provides you with a means to lead the conversation in a direction you want so that you can get the answers you need. In the situation of group interviews it is possible for debates to start, enabling you to get a good feel of the students' feelings and ideas. It also gives the students an opportunity to bounce ideas between each other. The one problem with the interview method is its inability to cater for people that are geographically wide spread.

3.2.3 Chosen Data Collection Method

After taking all these points into consideration, the following methods of data collection were selected:

Target Audience	**Method of Data Collection**
Students out on placement	Online Questionnaire
Students returned from placement	Interviews (group where possible)
Students who initially wanted to go on placement	Interviews (group where possible)
Students from other universities who have done a year in industry	Phone interviews

3.3 Students out on Placement

3.3.1 Carrying out the research

In respect to this project, the major advantage of the questionnaire is its ability to cater for students spread across the country. As students out on placement are all geographically spread it was not feasible to conduct group interviews with them. Also, due to the large number of students phone interviews would be too costly, thus the questionnaire seemed the most suitable method.

Designing and writing the questionnaire was a laborious task as it was important that the questions used were worded well. In order to gain the maximum amount of unbiased response the majority of questions were open ended in a hope that the student could expand on the questions as much as they liked. Before starting the task of writing the questionnaire a schedule for its use was planned:

Design and pilot issues	18/11/01 till 05/12/01
Sent out	05/12/01
Returned by	21/12/01
Analysis and write up	28/12/01
Written Up	06/12/01

Numerous draft versions were made until I felt satisfied that I had designed the questionnaire to a high standard.

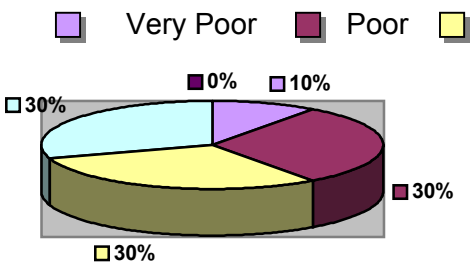
The next issue to deal with was selecting the best method in which to distribute the questionnaire. Numerous options were available. These included sending them via post, sending them via e-mail or making it available online. Advantages and disadvantages of all these routes were discussed with my supervisor. We felt a sensible method would be that of an online questionnaire that they could submit over the web. The main reason for this choice was that it was a lot faster and cheaper then sending them out by post and provided the students with an easy method to return the questionnaire. Aside from these benefits I was also able to get a head start in learning PHP, the scripting language chosen for the website (see section 5.1). Appendix C contains a copy of the questionnaire that was made available on-line.

As questionnaires have such a low response rate, I wanted to boost my chance of replies and thus offered them entry into a prize draw if they returned the questionnaire before the specified date. An e-mail was sent out too all students doing an industrial placement this year, with a link to the on-line questionnaire.

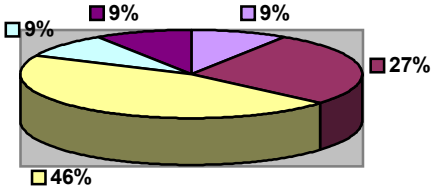
3.3.2 Results of the Research

Approximately 45% of the e-mails sent out returned questionnaires, which totalled 14 in all. A selection of the returned questionnaires have been included in Appendix C and a copy of all returned questionnaires given to the placement tutor for further analysis.

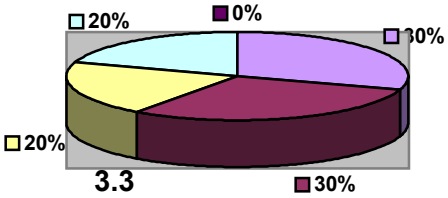
The following is a statistical analysis of the closed ended questions in the questionnaire



When asked how they would rate the SOC for introducing the Industrial Placement scheme. **Figure 3.1**



When asked how they would rate the SOC for providing help for finding placements. **Figure 3.2**



When asked how they would rate the SOC for providing help with writing CV's and information on interviews. **Figure 3.3**

In all three questions the majority of responses were poor to satisfactory, showing that the students do feel that there is room for improvement in these areas. The introduction of the Industrial Placement scheme to the students provides a more rounded response (Figure 3.1), with results spread fairly equally across the range of options. Nearly 50% of the students in my sample were satisfied with the facilities provided to them by the SOC for finding placements. However, a total of 36% felt that this service was poor and in some cases very poor. Figure 3.3 shows the area with the most demand for improvement, where 60% of the students selected the option poor or very poor.

Aside from the closed ended questions a number of opened ended questions were asked so that students could expand their answers and provide as many ideas and suggestions as possible. The following points were made:

- The students did not know of many of the facilities offered by the school. In most cases these included the current industrial placement website and past placement database. It was also mentioned that they were unaware that the career's service helped with industrial placements.
- Students requested more information on:
    - Student loans, student cards and the council tax certificate.

- LCGI and the cost of doing this award.
- Tuition fees and the reasons why they have to pay it.
- Choosing their final year modules.

- Most students requested more help with writing CVs and attending interviews. The following suggestions were made:
  - More help sessions and workshops.
  - Mock interviews.
  - More input from personal tutor.
  - Some example interview questions and assessment centre exercises so that they know more what to expect from them.
- Students requested more contact from the staff on their year out.
- Students liked the idea of being able to contact other students on industrial placements.
- Students felt there was a need for better communication between the SOC and the Careers service.
- Students requested making registration for their year out easier.
- Most students felt there needed to be more in the way of organisation. Here are some comments from the returned questionnaire.
  - *"The process of informing the University of my placement and 'leaving' at the end of the year seemed very informal, and perhaps even disorganised. Formal procedures (perhaps a full information pack with forms to fill in at different stages of the process) would have made me more comfortable"*
  - *"I think the level of support from the department is very good, however I think more planning and information on the stages after you have a placement could be improved upon."*

3.4 Students returned from Placement

3.4.1 Carrying out the research

As all students returned from placement are now back for their final year at University, group interviews seemed the most appropriate method of data collection. The layout of interview questions were based on the questions applied to the questionnaire. However, as hoped I was able to conduct open interview discussions where the students could express their thoughts freely without being restricted by the content of my questions. The students were therefore able to bounce ideas and suggestions from one another. I also made the point to mention that all students who participated in the interviews would be kept anonymous.

Three Interview discussions took place in early January, the transcripts of these can be found in Appendix C.

3.4.2 Results of the Research

The discussions broke down into two main categories. The school's help with finding placements and the support offered by the school while out on placement. The main points raised were:

Finding a Placement:

- Not enough information given on the placement scheme. *"Felt like we were doing it completely off our own backs. This does not mean that we want to be puppy fed! Just that there could be a better balance. There was no guidance and this may be why many people lost interest."* Anon (2002)
- Students felt our University didn't seem to have contacts with many companies like other universities. A number of interviewee's mentioned other universities and how they had established contacts with different companies.
- Students felt that there was a lack of support with finding placements and that the University didn't seem to care whether they did a placement or not.
- Not many people knew of the database of past placements and those that did had found out by word of mouth or specifically asking for it. They found that the majority of contacts within the database were useless and out of date.
- No web resources provided for help with finding placements.
- The school didn't work in conjunction with the career's service.
- Students were unsure of what to do when they had found a placement. They felt more organisation was necessary.
- After listing off the resources available to them for finding a placement, the overall response was that they had not been informed that these facilities existed (for list of resources please see questionnaire in appendix C). They suggested that if they had known it might have made the job searching easier.
- Not enough help was given on writing CVs. Only one workshop was provided.
- There were no resources available to help with interview techniques.

Out on Placement

- Quote: *"I had a lot of hassle getting my union card, this is something that should have been sorted out before we left for our year in industry. It almost felt like the department didn't realise that we wouldn't be in Leeds to pick them up or that we didn't want one."* Anon (2002)

- Many had problems getting their tax exemption form and felt it should have been more organised.
- There was a lot of confusion over why we had to pay tuition fees when many felt there was little to no contact with the University while out on placement. One interviewee reported: *"It felt like we were no longer a member of the University."*
- LCGI brought about a lot of discussion. Many interviewee's were still unsure what the award was about and how they could get it. Many students felt that more information was necessary. Those that had applied for the award said that they would have preferred having the forms online to fill in rather then lots of hard copy hand written papers floating about.
- More information needed on how the University assesses the year in industry. A few interviewee's remarked that they would have preferred the year out to be marked in some way that reflect how well they did on their year out. Many felt it was unfair how someone who had had a successful year out had no way of reflecting this in their degree. When asked how they thought the University should mark the year out it was suggested that this could be done through the report written by their managers.
- Quote *"I would have found it very helpful to have some sort of newsgroup for me to contact other students out on placement. I was often given work on my year out that required certain technical knowledge that I didn't have. If this newsgroup was around I am sure that I would have used it."* Anon (2002)
- Many students were unable to or did not know how to access the newsgroups offered by the school (SLRN) because of firewalls that prevented them from using telnet (for more information on this see section 4.5.2).
- Quote *" I would have liked to get to know others out on placement as I think it may have allowed me to relax more about coming back. I was very worried that all my friends had graduated and I wouldn't know anyone. I think it is strange to think that so few of us went on placement yet we don't know each other. It shows from just sitting around this table, I only knew 4 of us actually went on placement!"* Anon (2002)

3.5 Students who initially wanted to go on Placement

3.5.1 Carrying out the research

Once again my target audience in this area would all reside at the University and thus I opted for interview discussions as my method of data collection. To contact my target audience I posted messages to relevant newsgroups requesting participants for the interview. A transcript of the interviews that I carried out can be found in Appendix C.

3.5.2 Results of the Research

When the interviewee's were asked what stopped them from doing a placement they all agree that not enough help was given on finding placements.

"I was under enough stress with coursework and couldn't juggle looking for a placement at the same time." Anon (2002)

They also noted that there was a lot of confusion over what they need to do and by when. Two of the interviewee's thought that you had to have found your placement before you changed to the 4yr programme and thus thought that they had missed out on the opportunity.

When asked whether they thought the University could have done anything different that would have allowed them to go on placement they suggested:

- More up to date information on the placement scheme.
- Provide more adverts from companies, perhaps by making more contact with different companies.
- More information on good companies to apply.

3.6 Students from other universities

3.6.1 Carrying out the research

In order to gain understanding of the competition the students in the SOC face, I felt it was important to investigate how other universities deal with the year in industry programme. By comparing and contrasting facilities offered and the views students have on these facilities I was able to get a better grounding on which facilities were successful and which were not.

While students from other universities are geographically wide spread the number in which I gained information from was very small compared with the number of students out on placement. Thus phone interviews seemed an appropriate method of investigation.

Altogether interviews were conducted with students from 4 different Universities.

- York University
- Leeds Metropolitan University
- UMIST
- Manchester University

Interview questions and a transcript for each interview can be found in Appendix C.

3.6.2 Results of the Research

York University:

Students at this University are provided with a placement coordinator (Gus Vigors), whose sole job is to look after those on the industrial placement programme. The process begins in the student's first academic year where they are asked to write their C.V and give it to Gus, he will then go through the C.V and make sure it is of a high standard. They are provided with 2 lectures to help them with writing their C.V. During the summer before their 2nd academic year they are expected to apply to 5 companies independently that they would like to work for. When they come back for the 2nd year, Gus will have lined them up with a number of interviews for jobs that he thinks best suit the student. As York University has established a large number of contacts with different companies it is normal for the companies to go to the University to perform the interviews. Nearly all placement students have a placement by Christmas.

During their placement year students get two visits from Gus (September and March). All administration such as registering for their year out and getting their tax exemption forms are carried out before they leave for their placement. Selection of final year modules and final year project are carried out online. During their placement they have to fill in a PDS log book which is then accredited by the BCS when they finish. Their placement year is not graded, they either fail or pass depending on whether the placement was successful or not.

When the interviewee was asked whether she liked the degree of input the University had with their placement year she said yes, commenting that it gave her more time to get on with coursework and reduced the amount of pressure she was under.

UMIST:

At UMIST, the industrial placement process begins at the beginning of the second year where students are expected to enrol on a module specifically designed for those going on placement. The module guides the student on writing a C.V, building interview techniques and all other general information to do with the year in industry. Like our University, students are then expected to find their own placement. Most acquire a placement during the first semester and beginning of the second semester of their second year. Students get visited once whilst out on placement (usually around the middle of the year).

Placements are assessed by a report that they hand in at the end of their year out and a presentation that they give on their placement experience. These marks then count towards their final degree.

When the interviewee was asked whether he liked the degree of input the University had with their placement year he said yes, but commented that more could have been done to help them find a placement.

Manchester University:
Students begin looking for a placement during the beginning of their second year after attending an initial placement meeting. As with our University, students are expected to find their own placement. Job advertisements are posted on notice boards and in the careers service. There is also a website that provides help with writing C.Vs and interview techniques. Placements are marked however this does not get reflected in their final degree mark unless the student is a borderline case.

When the interviewee was asked whether he liked the degree of input the University had with their placement year he said no, commenting that compared to other universities his University could have done a lot more to help him find a placement.

Leeds Metropolitan University:
Like York University, LMU has a dedicated placement office that deals with the industrial placement scheme. The placement process begins at the beginning of the 1st semester of the second year, where students are required to attend weekly placement meetings. These meeting help the student with things like writing a C.V, performing interviews and how to fill in their log book while on placement. Students are required to have the contents of their C.V ready by October and then the University puts it into a standard template and goes about finding them a job. Students are free to apply independently if they wish.

While on placement the majority of tasks are carried out online or via post. Their placement is worth 20% of their final degree mark. Assessment is through a log that they have to fill in every month, a visit by an assessor from the University and a report that they write at the end of the year.

When the interviewee was asked how he felt about the amount of input his University had in the placement year he said:

"My University has been great, they offer just about the right amount of support and go out of their way to help you if you need it" LMU representative

3.7 Research Conclusion

During my research it became clear to me that a large amount of the ideas and suggestions that I received could not only be implemented on the placement website. They do however provide the SOC with a better understanding of how the students feel and an insight into how to improve the services currently offered. Therefore, in addition to the placement website I will supply the SOC with a list of possible recommendations for improvements.

The results of my research with the different target audiences in the SOC seemed to show a recurring theme. The majority of people agreeing that improvement in the industrial placement scheme should be made. The main areas of neglect are summarised as follows:

- Not enough help with writing C.Vs, interview techniques and attending assessment centres.
  Proposed solution: Provide information about these topics on the website, with links to useful resources and advice on where to find more help.
  Recommendation: Providing the students with more help sessions in these areas, with the possible creation of a new module or change of an existing module designed for industrial placement students. Encouraging tutors to play a more active role and possibly carry out mock interviews.
- More help needed with finding placements.
  Proposed solution: Providing a front end to the existing past placement database (which will need to be made more up to date), database driven web pages for placement opportunities, information on other facilities available with links to good online resources.
  Recommendation: Acquiring contacts with companies, making them aware of the SOC industrial placement scheme.
- Not enough organisations and structure in the placement scheme.
  Proposed solution: Having all placement information in the one place (i.e. the website) and providing a timeline of the placement process. Also providing an online placement agreement form.
  Recommendation: I think a problem has existed here due to the large turnover of placement tutors (four in four years), this can cause confusion and thus a lack of

organisation. A review of the industrial placement process is under review and should hopefully alleviate this problem.

- More up to date information and help from the staff needed.

  Proposed solution: The home page of the website will contain the latest news entries added by the placement staff so that the students can always keep up to date on what's going on. The website will contain a message forum that will be monitored by the placement staff, so students can post any queries here or e-mail the placement staff directly via an online feedback form.

  Recommendation: An increase of industrial placement meetings may help students feel more at ease with the process.

- More contact requested while out on placement.

  Proposed solution: Once again, with the introduction of the message forum students may feel less isolated from the University.

  Recommendation: Visitation of students whilst out on placement has changed this year and most students will now get visited at least once. Students have also requested a meeting for when they return to University in their final year. This is so that they can find out what has changed since they left and possible make it less daunting for them when they return.

- Better organisation of administrative tasks needed.

  Proposed solution: Information on all administrative tasks will be available online and the placement agreement form will be available for online submission.

  Recommendation: Registration of students going on placement has recently changed and will now take place before they go on placement. It may possibly be an idea to activate all placement students' account automatically as this seems to have caused a lot of trouble to the placement students.

- Assessment of placement year needs defining

  Proposed solution: Once the method of assessment has been finalised all assessment information can be added to the website.

  Recommendation: Students have requested that their industrial placement get graded and that this grade go towards their final degree. Possible methods of assessment include:

  - Keeping a log during the placement.
  - Writing a report at the end of the placement.
  - Performing a presentation on their placement experience.
  - Obtaining a report from their employer.

4. REQUIREMENTS ANALYSIS

The purpose of this chapter is to take all the information received during my research and my own experience as a basis of analysis for the requirements of the website.

4.1 Identification of Users

There are essentially three main users of this placement website, prospective placement students, placement students and placement staff. As this website will have publicly accessible sections (so that students on placement can access it), it will be viewable by all. While I am not going to categorise these external viewers as a user it is important that I identify them so that I can determine all security needs (section 4.5).
Throughout this project, users of the website will be defined as follows:

4.1.1 Prospective placement student:

These SOC students can be split into two further categories, those that are seeking a placement and those that have found a placement. The requirements of these students can be summarised as:

- Keeping up to date with all placement information.
- Help with writing a C.V and interview techniques.
- Information on placement opportunities.
- Better access to available facilities (e.g. past placement database).
- Information and links to useful resources
- Submission of Placement Agreement Form.
- Communicating with other placement students.
- Communicating with placement staff.

4.1.2 Placement student

Placement students are all the students within the SOC that are currently on placement. Their requirements can be summarised as follows.

- Keeping up to date on all placement information.
- Information on administrative tasks:
    - Registration
    - Council Tax exemption form
    - Tuition Fees and Student loan
- Information on coming back for their final year (e.g. final year module selection, final year project)

- Information on the LCGI award and online log.
- Communication with other placement students.
- Communicating with placement staff.

4.1.3 Placement staff

The requirements of the placement staff will be to maintain this placement website and keep it as up to date as possible. These maintenance issues are discussed in section 4.4. A possible future enhancement of the placement website would be to also cater for the staff's needs, however these are outside the scope of this project. These enhancements could include helping the staff with administration tasks and recording information on all students on placement.

4.2 Website Contents

The website should contain the following:

- All up to date placement information.
- News and schedule information.
- Online placement agreement form.
- A method for students to communicate (E.g. message forum).
- Help and advice on writing CV's and attending interviews.
- Past placement evaluations.
- Facilities for feedback.
- Database driven web pages for placement opportunities.

In addition to the above students also requested the ability to fill in their LCGI learning logs online.

4.2.1 LCGI Learning Log

As part of the industrial placement scheme, students are able to apply for the Licentiateship of City and Guild (LCGI) award. "A senior qualification recognised and valued by employers as a record of competency in specific personal skills. The School of Computing has been authorised to award the LCGI entitled "Computing at Work" to students who have successfully completed an industrial placement and two years of undergraduate study."[3]

Students that wish to apply for the award must demonstrate competencies in 7 personal skill areas. This is usually done by filling in a learning log created by Adrian Spender (1997/8) [3].

Currently a hard copy version of a learning log is available for students to fill in. Some work has already been done on making a learning log available online (Adrian Spender, Summer 1998) however this is yet to be used.

Mandy Schiffrin is the teaching assistant of the Placement tutor and has taken on the role of maintaining the current industrial placement website. After discussions with Mandy it was decided that she would look into the facilities for making the learning log available on-line. Her investigation found a system (currently under construction) available within Nathan Bodington Building that would provide us with the facility to create a learning log on-line ("the Nathan Bodington Building is a website developed by the TLSU which encourages and assists collaborative learning between student and tutors" [4]).

After attending a presentation of the system from Jon Maber at the flexible learning unit we concluded that this learning log system would be viable for use within the school and be ready in time for the coming academic year. Mandy has since set up a learning log for the SOC, which can be found at:
http://www.fldu.leeds.ac.uk/site/nbodington/compstudies/indusplace/learninglog

To be able to access this log you will need to set up an account at the Nathan Bodington Building. For more information on this see: www.csdb.leeds.ac.uk/csyrr/LCGIHelp.php .

4.3 Database Requirements

The underlying database will need to be well structured, normalised and be able to carry out the following functions:

- Interaction with an appropriate scripting language, used to build the website.
- Allow records in a table to be queried.
- Allow insertion, updating and deletion from its contents.
- Allow authentication.

The database will hold:

- Current placement opportunities.
- Normalised version of the past placement database.
- Web page contents to allow dynamic pages on the website.
- Latest news entries.

4.4 Maintenance Issues

Perhaps one of the most important issues of this website is making it easy to maintain. This is possibly the reason why a number of previous attempts of having a placement website have not fully succeeded. Due to the varying technical ability within the placement staff it is important that any maintenance of this website is as easy and effective as possible. Maintenance tasks include:

- Changing the contents of the web pages.
- Adding new web pages.
- Adding and deleting placement opportunities.
- Updating, adding and deleting past placement records.
- Adding the latest news entries to the home page.
- Maintenance of the message forum

4.5 Access Issues

Some of the intended users of this system are likely to be geographically wide spread and there is therefore no way to determine the platform or browser that they will view the website with. This then raise the following issues:

4.5.1 Web Browsers

The two most commonly used browsers today are Microsoft Internet Explorer and Netscape Navigator. It is important to note that while these are both based around the HTML 4 standards set by the W3 consortium there are still a number of differences in how they display web page contents. It is for this reason that the website has been designed, where possible to avoid browser specific features.

4.5.2 Newsgroups

Currently the school offers placement students a number of newsgroups running on the news server lnntp.comp.leeds.ac.uk. This server is publicly accessible by all, although users without an SOC user account will be restricted by the SOC security policy (i.e. they will be unable to post to secure groups). There does however exist a problem with some placement students in that due to firewalls on their company's networks they are unable to connect to these newsgroups.

Firewalls are used to protect the company's data and restrict communication between the private and public network. Most firewalls work by restricting the use of certain port numbers.

A port is a logical channel or channel end port used to allow communication between machines. There are a number of 'well-known' ports that remote machines can use to connect to servers. For instance web-servers listen on port 80 and news-servers listen on port 119. If the firewall restricts the use of port 119 at the placement student's company they will be unable to access the placement newsgroups. It may be possible to use SOCKS (a protocol that provides flexible frame working for secure communication [5]), to overcome this problem, however there is no guarantee that the firewall will support this.

For this reason a message forum will be implemented on the placement website independent of the placement newsgroups, allowing all placement students access to a communication area.

4.6 Authentication Issues

Whilst the placement website is going to be accessible by all, all maintenance pages will only allow access by the placement staff. In order to restrict access to this section, user authentication of the maintenance pages will need to be put in place. The most suitable method of authentication is a username and password system. There are more secure systems (e.g. Public key cryptography) available however as the data held is of little values to any one other than the authorised user, these methods will not be necessary.

5.DESIGN

The purpose of this chapter is to provide a technical specification to meet the requirements stated in the previous chapter. I shall first justify my choice of development tools and then look at the each specific area of design in turn.

5.1 Choosing Development Tools

In order to create a database driven website the appropriate development tools need to be selected. As the database would eventually reside on a server within the SOC, a server-side scripting language was necessary to access the information contained within the database. There are a number of different scripting languages available, these fall in to two main categories: "Common Gateway Interface (CGI, or calling an external program that returns HTML) and Super Markup (an HTML page embedded with other-language markup code -- a superset of HTML)" [6]. Selection of the appropriate scripting language was achieved by looking at the pros and cons of each language in respect to the website's needs, time constraints and the skills of myself and of those that will maintain the placement website.

The scripting languages ASP and PHP are the two most prominent to date and are available for me to use within the school. ASP (Active server pages) comes from Microsoft and works well with other Microsoft products such as IIS, SQL server and MS access. ASP supports a number of programming languages (although VBScript is most commonly used) and is built around a COM-based architecture. PHP is an open source alternative to ASP and can run on multiple platforms (e.g. Linux or Windows). After investigation into the two scripting languages I selected PHP for the following reasons:

- PHP is open source, which meant that I could develop the website on my home PC.
- PHP is cross platform, which meant it was suitable to run on the server where the current placement website resides. It also gave me peace of mind that although I was developing on a windows platform it would still run on any other platform.
- PHP can also use any COM object supported by ASP.
- As the placement website contains dynamic pages, speed of querying the database was important. The PHP engine on the whole provides faster results than ASP as everything runs in PHP's memory space, where as ASP has to deal with the overheads of using COM objects.

  "*The goal of the language (PHP) is to allow Web developers to write dynamically generated pages quickly"* PHP Manual [7].

- PHP is based around java/C++, a style of programming that I am very familiar with. As I had never used ASP or PHP before I felt that this would give me a head start and making the learning process a lot easier.
- As PHP is open source there is a huge on-line community to provide support and advice. Unlike commercial closed-source products I have access to the source code and thus I am free to make any modifications.
- As PHP was designed for use on the web, there are many built in web related functions.

Once I had selected the scripting language, I needed to select a database management system (DBMS). There are a number of DBMSs available to me that fit the database requirements that I laid out in the previous chapter (section 4.3). These include:

- MySQL
- PostgreSQL
- SQL Server
- MS Access

The past placement database already existed in MS Access, but the placement tutor requested that this be moved to a more suitable DBMS. Possible databases where then discussed and finally limited to a choice between PostgreSQL and MySQL. While PostgreSQL is currently the DBMS used by SIS (see section 2.2.3), the placement website would be 'stand alone' and therefore not need to interact with SIS. As PostgreSQL was not a compulsory choice I opted for MySQL due its ability to work well with PHP. PHP integrates best with MySQL, offering lots of tool to manage and maintain such a database. Unlike other databases, PHP offers MySQL a full set of functions. Providing useful database specific functions like:
Mysql_fetch_array() and mysql_num_rows()

5.2 User Interface Design

5.2.1 Usability

The success of a website is largely dependent on the format and contents of information displayed. The aim is to make the website as usable as possible. Jenny Preece (1993) a senior lecturer from the Open University, suggested that to be able to design such a system would need knowledge about:

- The website's users

- How the website will be used
- Environment in which the website will be displayed
- Technical and logical feasibility

[8]

It was thus essential to considered each of these issues when designing the placement website.

5.2.1.1 The Website's Users

As stated in the first chapter, the aim of the placement website is to aid *students* in the School of Computing who are on the Industrial Placement degree programme. It is therefore safe to assume that they are all computer literate. It is also considered a well-known theory that people who work in the computing field have a preference for information to be concise and clear.

5.2.1.2 How the Website will be used

As detailed in chapter 4 the website has a number of uses, from providing placement information, to an interface for searching for placement opportunities. As users of the website have varied requirements, it is important that it is clear to the user where they can find their information. For example, a student who is out on placement will not require information on finding a placement. The structure of the website was therefore designed to follow the logical structure of the industrial placement process.

- About the industrial placement scheme
- Finding a placement
- Found a placement
- Out on placement

5.2.1.3 Environment in which the website will be displayed

It is hard to specify the environment in which the website will be displayed as students are likely to be geographically wide spread. As there is no way to determine the platform or browser that they will view the website with, the website has been designed, where possible to avoid browser specific features.

5.2.1.4 Technical and logical feasibility

The website has been designed to use the full potential of the facilities available to it, while accommodating possible future enhancements.

5.2.2 Interface

In order to give the website a consistent look and feel, each page on the site was based around the same template (aside from the message forum). This template provided each page with a menu to the left, border at the top and links at the bottom and right of the page.

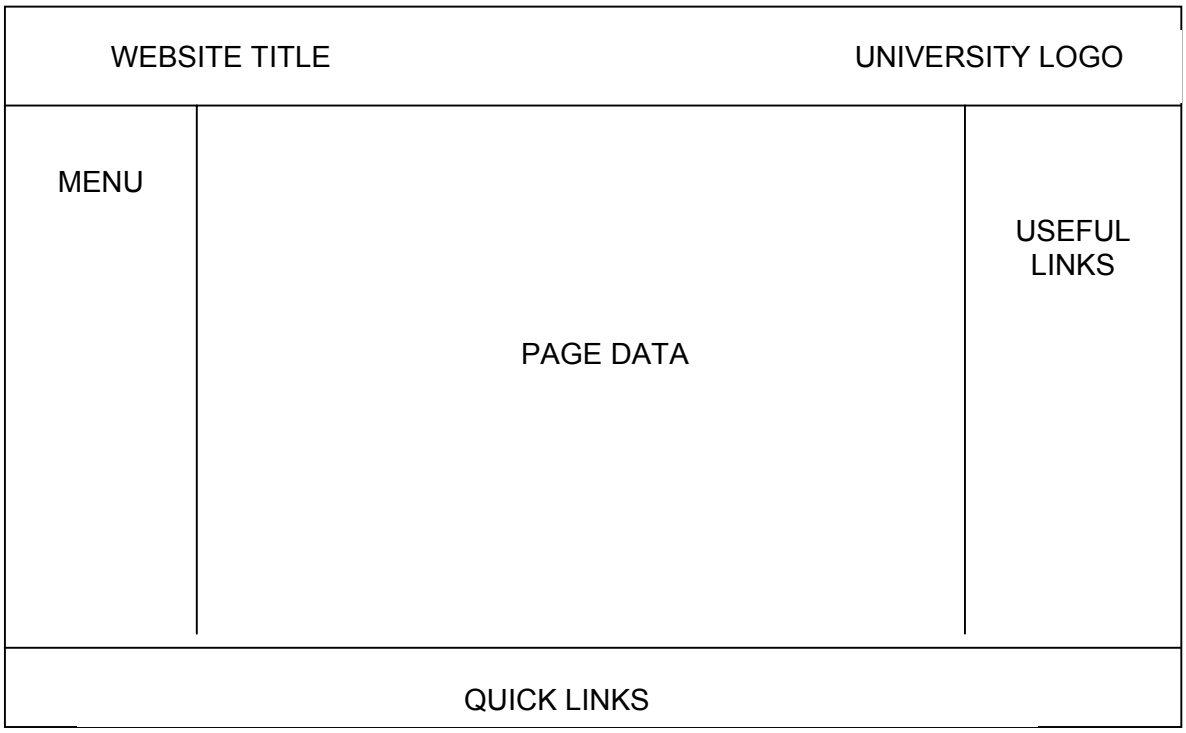


Figure 5.2.2 structure of template used for each site page

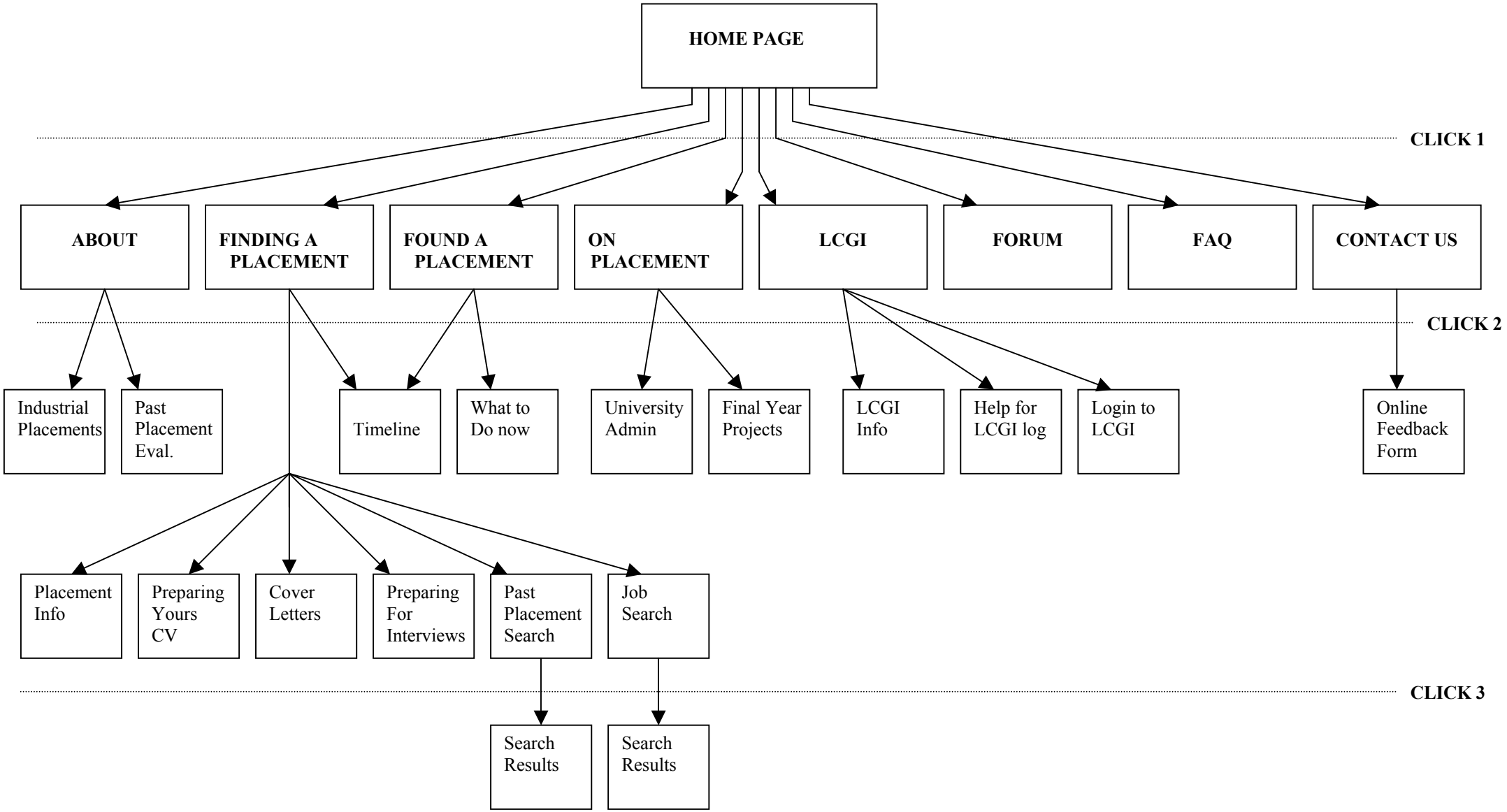
The selection of colour was based on the standard University colour and implemented to give an aesthetically pleasing design.

5.2.3 Site structure and Navigation

To provide the users with easy navigation, the placement website has been designed with the 3 click rule in mind. This rule states that a user should be able to get to any page in the website with at most three clicks [9]. As mentioned in section 5.2.1.2 the structure of the website has been designed along the same structure as the placement process to allow users straightforward navigation of the site.

Aside from the maintenance website (discussed in section 5.4) all pages are accessible publicly and therefore contain no authentication process.

Figure 5.2.3 Structure of placement website



5.3 Database Design

As detailed in section 4.3 the database behind the website needs to be able to perform a number of functions. These can be summarised in the system outline chart below.

Input requirements	Prospective Placement Student	♦ Enter queries to retrieve past placements ♦ Enter queries to retrieve job advertisements ♦ Enter a message in the message forum
	Placement Student	♦ Enter a message in the message forum
	Placement Staff	♦ Add/delete weekly news entries ♦ Add/update past placement records ♦ Add/delete job advertisements ♦ Changes web page contents ♦ Change message forum details
Output requirements		♦ Weekly news entries ♦ Queried past placement records ♦ Queried job advertisements ♦ Dynamic web pages
Storage requirements		♦ Weekly news entries ♦ Past placements ♦ Job advertisements ♦ Web page contents ♦ Message forum contents

In the case of the placement website, database design is concerned with holding the storage requirements of the system in the most suitable logical structure. When designing a relational database there are a number of proposed design methodologies that can be used. I am familiar with two methods that can be adopted.

- Taking the universal relation, identifying names and nouns as field names, then decomposing and normalising this relation against a given set of functional dependencies.

- Producing a semantic model such as the entity/relationship model, identifying entities and the relation between them. “A top down approach which starts with real world entities and ends up with a formal database design” [10]

I selected the entity/relation model, as I am more familiar with the methodologies involved. My first step was to identify the database’s entities and their corresponding attributes and then identify any relationships between these entities. Once I had defined my entities I found there to be no relationships providing me with the following entity/relationship model.

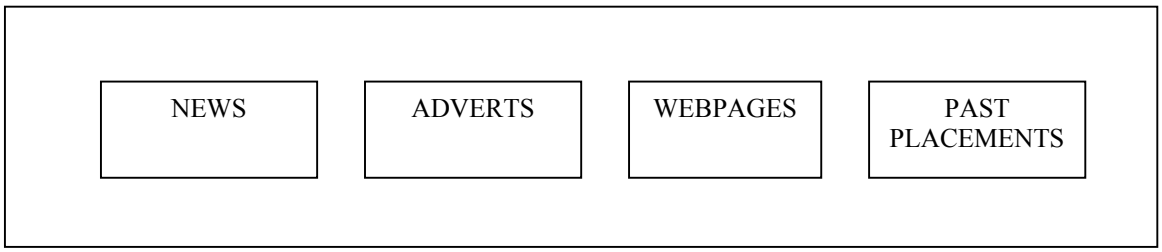


Figure 5.3.2

5.3.1 Weekly News

To provide students with the latest placement information the home page of the website displays the three latest news entries. These news entries are entered by the placement staff and hold the date it was created, the title of the news entry and the description. The following entity and attributes were identified:

NEWS(news_id, creation_date, title, description)

5.3.2 Past Placement

As mentioned in section 2.2.2, the school holds an access database containing a past placement table. Investigation of this table found it to be vastly out of date and in a poor structure. My intentions were not to update this table with fresh data but rather move a normalised version of this table to MySQL, and provide a front end to it so that a refresh of the data could be made easily. The following entity and attributes were identified:

PASTPLACEMENTS(placement_id, contactname, contactposition, companyname, address1, address2, town, county, postcode, telephone, fax, email, www, contactdate, applicationtype, description)

The original Access table contained fields that held the name(s) of the student(s) that had been on placement. These fields have been removed for the following reasons:

- Students have the right to keep this information anonymous (Data protection Act 1981).

- The school already holds this information. Holding the same information in different databases can lead to inconsistencies.
- The student's name has no relevant use in its intended context.

5.3.3 Job Advertisements

Students are able to query placement opportunities that have been entered by the placement staff in the database. Each job advert holds the company's name, position available and details of the placement. In order to provide students with current opportunities each job advert will hold a deadline date. The following entity and attributes were identified:

ADVERT(advert_id, creation_date, company, position, description, deadline_date)

5.3.4 Web page contents

The majority of pages on the placement website display dynamic content. The most recent entry of each page that is stored in the database gets loaded up when a page is accessed. The following entity and attributes were identified:

WEBPAGES(webpage_id, creation_date, page_name, page_data)

5.3.5 Message Forum

An advantage of PHP is that it has a large online community with an abundance of open source code. Creating a message forum involves a large amount of coding that has already been done by other PHP programmers. As it was not my aim to 're-invent the wheel' a sensible choice was to use an existing package that would integrate well into the placement website. There were a number of sites that provided free code for forums using PHP and MySQL:

www.phorum.org	"Phorum is designed with high-availability and visitor ease of use in mind. Features such as mailing list integration, easy customisation and simple installation make Phorum a powerful add-in to any website."
www.phpBB.com	PhpBB provides a large amount of functionality however is not very easy to customise.
www.phpslash.org	PHP version of Slashdot, a well-known message forum created in Perl. However work still needs to be done.
www.tforumhacks.com	tforum provides easy customisation and installation, with good documentation.

I experimented with each of these message forums to see how well they would integrate into the placement website. The message forum 'tforum' was selected, as it was extremely easy to customise, experienced fewer bugs and matched my style of coding. Using tforum added 13 tables to the website's database. A description of each of these tables and the message forum entity/relationship diagram can be found in Appendix D.

5.3.6 Normalisation

Once the tables had been established, each was then normalised to eliminate inconsistent data and redundancy. Each table was normalised up to 3rd Normal Form (NF). This can be achieved making sure that each table meets the following definitions.

1st Normal Form: The table contains no repeating attributes or group of attributes.

2nd Normal Form: The table's in 1st NF and no column that is not part of a primary key is dependent on only a portion of the primary key.

3rd Normal Form: The tables in 2nd NF and contains no 'non-key dependencies'

Definitions are defined by P.M.Heathcote 1996 [11] p.142-144

5.3.7 Integrity

Integrity is a fundamental part of the relational model. This is concerned with accuracy and correctness of the data in the database. To ensure integrity I have enforced the following integrity rule.

- Each relation **must** have a unique identifier or primary key.

As there are no relationships in this database there has been no need to enforce any other type of integrity rule.

5.3.8 Concurrency

"The term concurrency refers to the fact that DBMSs typically allow many transactions to access the same data at the same time. In such a system some sort of concurrency control mechanism is needed to ensure that concurrent transactions do not interfere with each other's operation" [10] page 391

As the website's underlying database is a multi-user database, these concurrency issues can arise. An example of this would be two placement staff trying to update the same past placement record at the same time. While this is very unlikely, mechanisms still need to be in place to prevent this from happening. MySQL deals with concurrency problems by locking a record (i.e. preventing anyone else from accessing it) while it is being updated.

5.4 Maintenance Website

In addition the placement website, a maintenance site was created to allow placement staff to update the placement database. This site uses authenticated access (username and password) to restrict only authorised users to enter. The purpose of the maintenance site is to detailed in section 4.4 and is structured as depicted in figure 5.4.

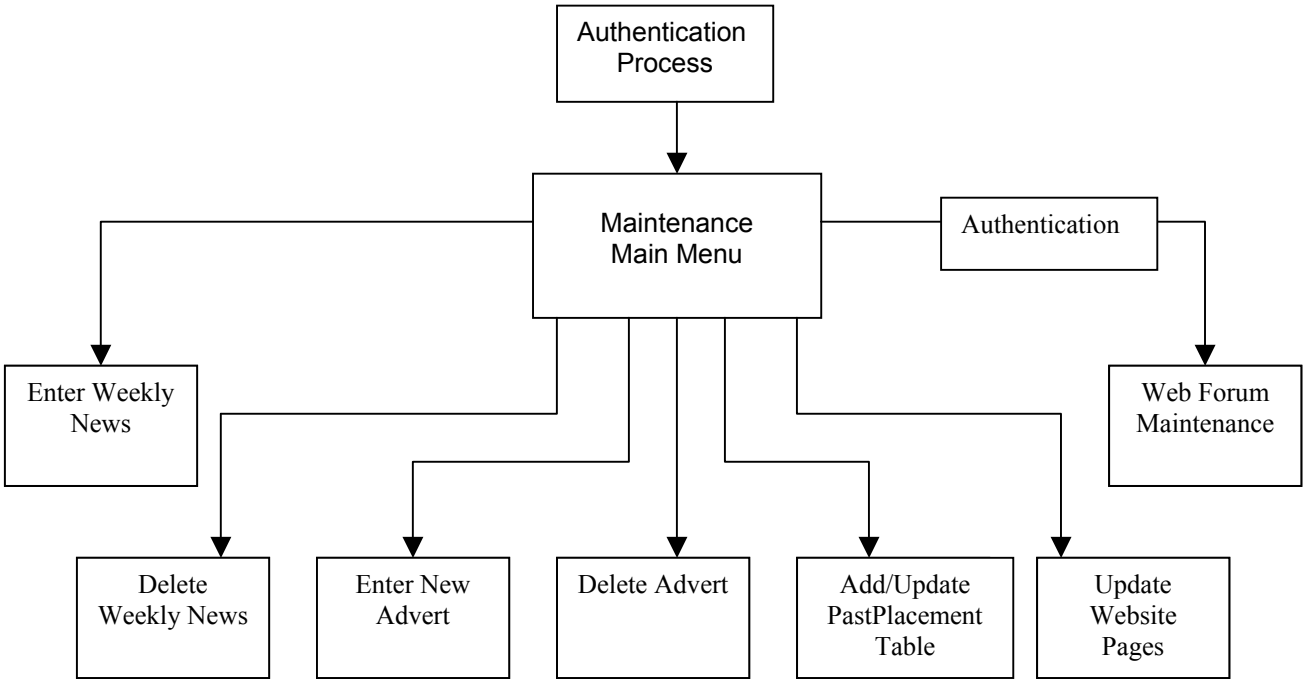


Figure 5.4 Maintenance site structure

6. IMPLEMENTATION

The purpose of this chapter is to detail the environment in which the website was developed highlighting any migrations issues. Outline the overall development process and describe any problems or issues that were faced.

6.1 Development Environment and Migration issues

For development and testing purposes the website was implemented on an internal web server within the SOC (www.csdb.leeds.ac.uk). This meant that once implementation was complete the whole website would need to be moved to the production environment. Thus an important element during implementation was to make sure that the website could be transported easily and with minimum effort. To move the website to a new server all files (keeping the same directory structure) need simply to be moved to the new server. No files will need to be edited unless the database moves servers.

A MySQL account was set up on one of the school's database servers (csdb.leeds.ac.uk) and thus that database would not need to be moved once implementation was complete. As I cannot guarantee that this will always be the case, provisions have been made to ensure easy transfer of the database from one server to another can be made.

In order to move the database to another server, a dump of the current database needs to be created. This can be done using the MySQL command as follows:

%> mysqldump –h csdb.leeds.ac.uk –u csyrr csyrr –p < CreateDatabase.sql

This will then create a file called CreateDatabase.sql in the current directory. Running this on the new host will upload the database structure and contents from the previous host. This can be done using the following MySQL command:

%> mysql –h <new_host> -u <username> <database_name> -p < CreateDatabase.sql

Once the database has been moved two files will need to be edited in the website directory with the new connection details. These are connect.php and ForumConnect.php.

```
<?
  $host = “<new_host>”;
  $username = “<username>”;
  $password =”<password>”;
  $db_name = “<database_name>”;
?>
```

Figure 6.1 extract of PHP code from connect.php

6.2 Outline of Development

The first step of implementation was to develop a template to use as the base of each page. All web pages began development in Microsoft FrontPage. This is one of many HTML editors available to ease the creation of web pages. While it does not support PHP, it was a useful development tool that simplified the efforts involved in creating any HTML. As PHP can be embedded into HTML (by placing any PHP within the tags <? And ?>), all HTML content was created first created in FrontPage and then the PHP added. All code was then copied and pasted into a text editor (such as notepad) and saved with a .php extension. Below is a screen dump of the template used behind almost all pages.

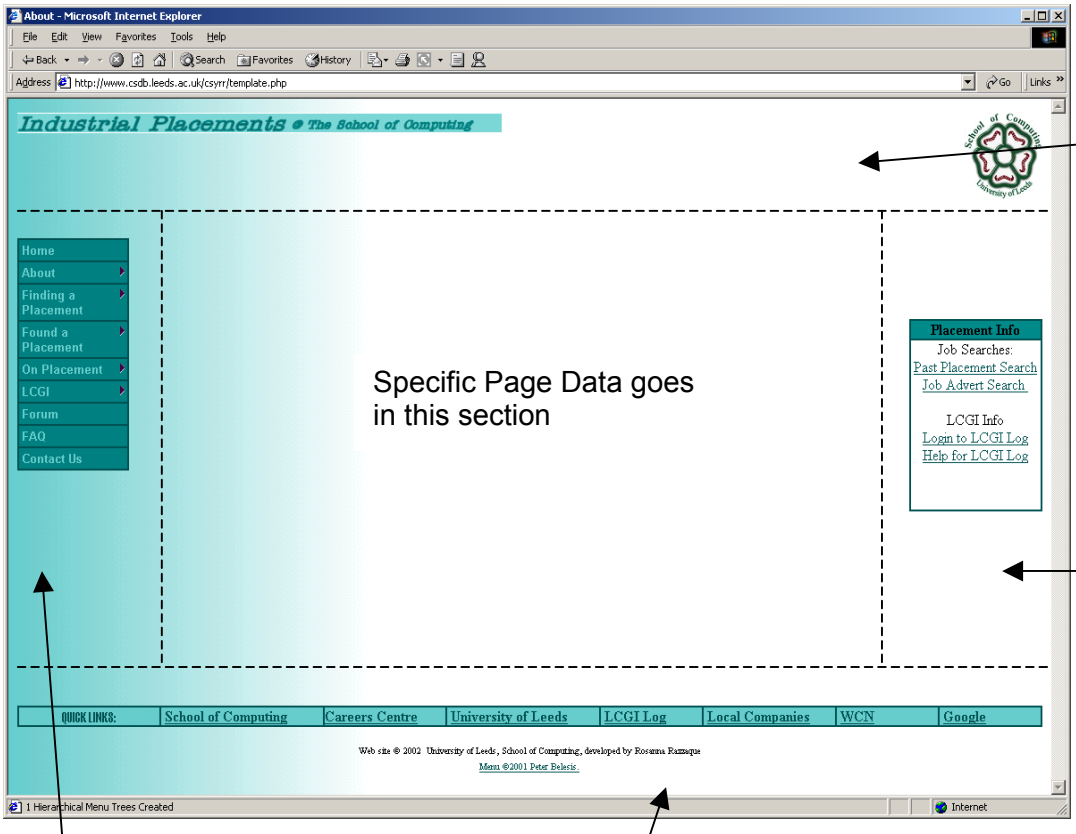


Figure 6.2

Each section (represented by the dotted line) is a page in itself, so that any updates to these part of the page only need to be made once and will be reflected throughout every page in the website. There are a number of different technologies available to do this, such as HTML frames and cascading style sheets, however PHP offered the best results with the most simplistic of methods. Each page is represented as a table in HTML with the structure shown by the sections in figure 6.2. Each cell in the table that requires a page to be pulled in from elsewhere uses the PHP function: <? Require("<pagename.htm>"); ?> which displays the specified page in the table cell.

6.2.1 Standard Pages

Standard pages are those that display dynamic contents (in the centre section of the template) that are pulled directly from the underlying database. These pages include:

Page Name	**File Name**	**Page on Website**
About	about.php	About / Industrial Placements
PastPlacement	pastplacement.php	About / Past Placement Evaluations
FoundPlacement	found.php	Found a Placement / What to do now
OnPlacement	oplacement.php	On Placement / University Admin
JobSearch	fplacement.php	Finding a Placement / Placement Info
Timeline	timeline.php	Finding a Placement / Timeline Found a Placement / Timeline
CV	cv.php	Finding a Placement / Preparing your CV
FAQ	Faq.php	FAQ, On Placement / FAQ
LCGIDetails	LCGIDetails.php	LCGI / LCGI Information
LCGIHelp	LCGIHelp.php	LCGI / Help for LCGI Log Bottom link on placement info
Interview	Interview.php	Finding a placement / Preparing for an interview
CoverLetter	CoverLetter.php	Finding a placement / Cover Letters
ContactUs	ContactUs.php	Contact Us

Table 6.2.1

Adding a new standard page has been made as simple as possible and the process involved has been described in the user manual (see Appendix E P. 7).

In order to display the page data dynamically a connection to the underlying database is first made and then the 'webpages' table (see section 5.3.4) queried to return the appropriate page data. This is achieved by using the following PHP connection string:

Pulled from connect.php, a file which specifies MySQL connection string.

```
$connection = @mysql_connect($host, $username, $password)
                or die("couldn't connect");
 if ($connection){
   $db = @mysql_select_db($db_name, $connection)
            or die("Couldn't select database!");
    ……….
 }
```

And the following SQL statement:

```
SELECT page_data
FROM webpages
WHERE page_name = <page_name_specified_in_figure6.2.1>
ORDER BY creation_date DESC, webpage_id desc LIMIT 1 ";
```

This SQL statement queries the 'webpages' table for the most recent entry of the specified pages and returns the page data stored. The page data stored is likely to be formatted using HTML that can be entered directly through the maintenance pages (see section 6.6).

6.2.2 Home Page

The home page is the first page that will be viewed by any user of the website. Set around the template defined previously, the home page displays the three most recent news entries added by the placement staff. It is hoped that these news entries will allow students to be as up to date as possible on all placement information.

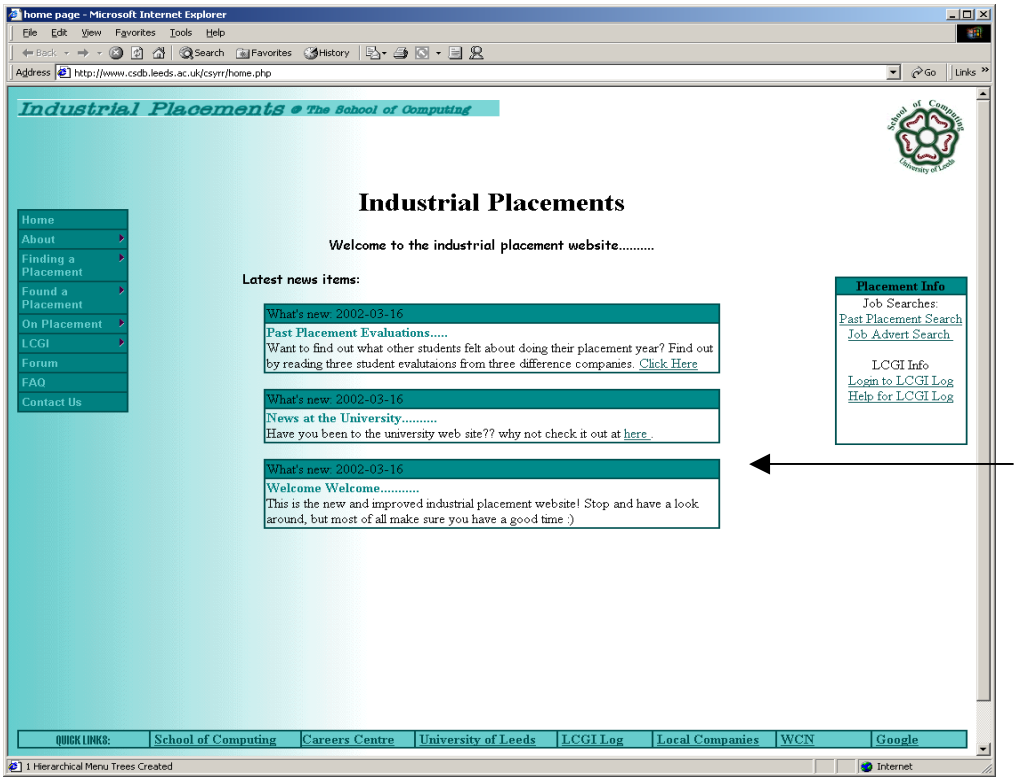


Figure 6.2.2

Each news entry will be added by the placement staff via the maintenance website and be added directly into the website's underlying database. The home page then connects to this database using the connection string shown in section 6.2.2 and pulls the three most recent news entries from the database using the SQL statement:

```
SELECT creation_date, title, description
FROM news
ORDER by creation_date DESC, news_id desc LIMIT 3
```

6.2.3 Search facilities

As detailed in section 5.3 the underlying database will hold information on placement opportunities and past placements details, in the tables 'JobSearch' and 'PastPlacements' respectively. In order for this information to be used by the students, a front ends has been created to each table to allow the user to query the contents of the tables.

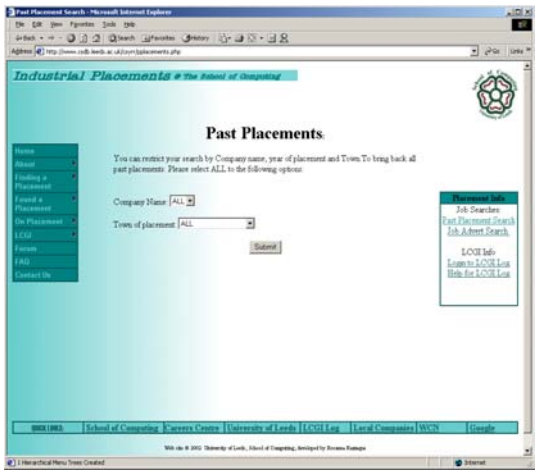
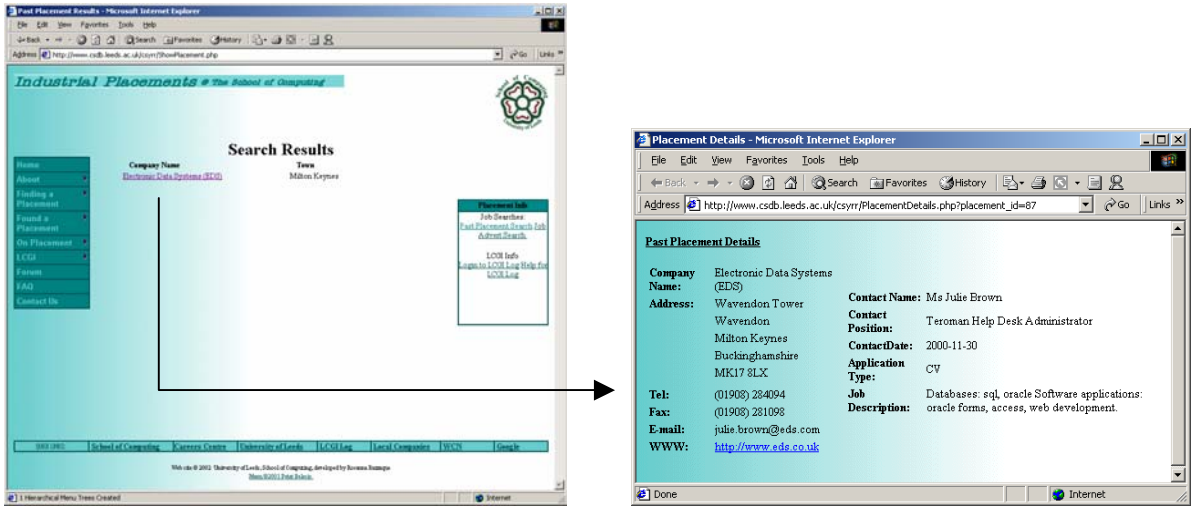


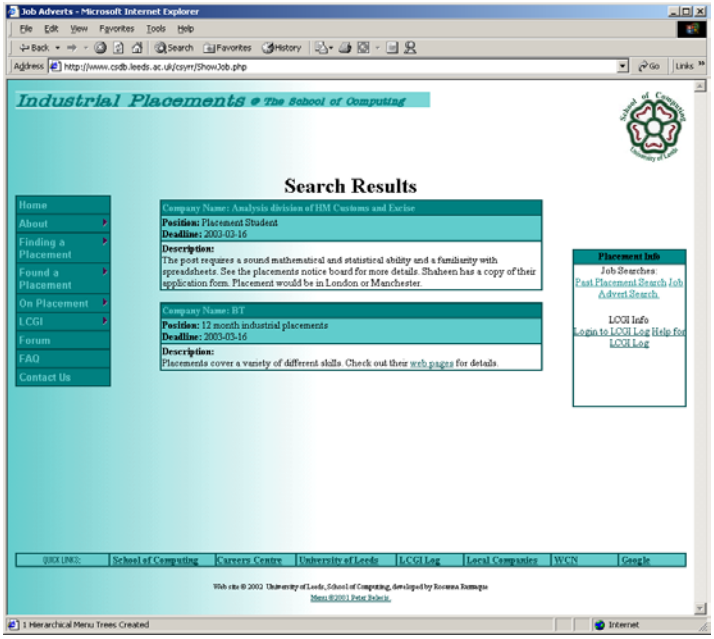
Figure 6.2.3a

Figure 6.2.3b

Once a user has submitted their search requirements for past placement details, matching companies are listed. The user can then select any company from this list to retrieve all the details held in the database for that company.



Once a user has submitted their search requirements for job advertisements, matching adverts that are not past their deadline date are displayed.



6.2.4 Placement Agreement Form

The placement agreement form needs to be filled in by a placement student before they go on their year in industry. Discussions with both the placement tutor and the secretary lead to a request to make this form available to submit online (section 2.2). An additional request was to design a new placement agreement form to use. This can be found in appendix F.

The facility to submit the form online was accomplished by creating a PHP script, which reads in the values entered in the form and then e-mails the form (in HTML format) to the placement secretary. The placement secretary then just prints out the e-mail to retrieve a hard copy of the student's placement agreement form. As the form can be submitted online, the student cannot provide a signature. After discussions with the placement tutor it was decided the student number would be used to uniquely identify the student.

The online placement agreement form can be found as a link on:

www.csdb.leeds.ac.uk/csyrr/fplacement.php

6.2.4 Feedback Form

A feedback form has been provided to the students to allow them to contact the placement staff. This can be found as a link on the 'Contact Us' page. Once submitted, the message will be e-mailed to the placement e-mail address (placemnt@comp.leeds.ac.uk).

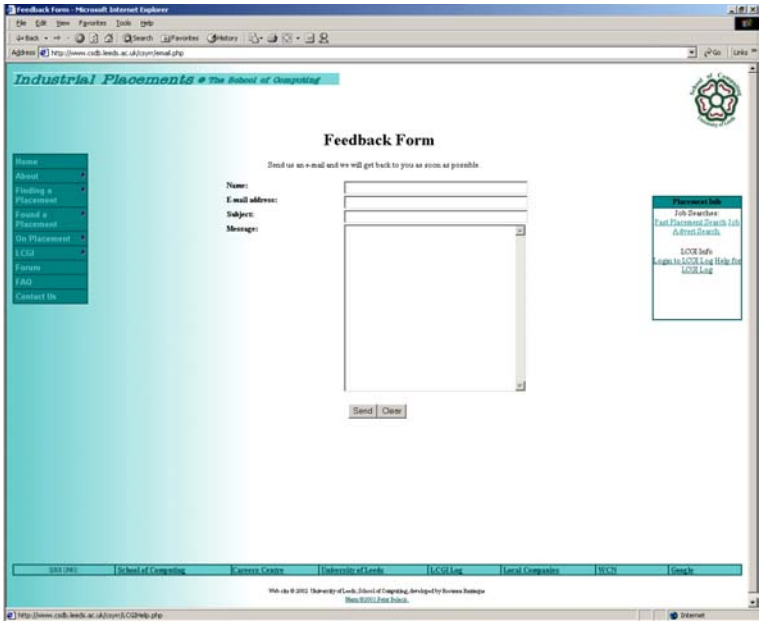


Figure 6.2.4

6.2.5 Maintenance site

The maintenance site was implemented to provide the placement staff with the greatest amount of control over the contents of the website, with the smallest amount of effort. Full detail of the maintenance site can be found in the user manual (Appendix E).

6.3 Problems and Issues

Throughout the process of implementation a number of problems arose, these have been outlined below.

- Difficulties were faced with choosing the appropriate search method to provide the students with for the past placement and job search. It was first hoped that the students would be able to query all fields in the table using a single keyword box (the system used by most search engines, e.g. www.google.com). However, due to the version of MySQL being below version 3.23.23 on the SOC servers (with no intention of upgrade in the near future), I was unable to implement 'full text indexes' on the fields in the tables. This was a major disadvantage and meant that an exact match system would only be able to be used (fluff words such as 'and' and 'the' would not be removed), thus reducing the usefulness of such a system. The execution of queries would be likely to take longer and the results returned less accurate.

Instead of using a keyword box, drop down lists were implemented as shown in figures 6.2.3a and 6.2.3b. There are disadvantages to this search method too, as it restricts the user's search criteria. I would liked to have spent more time on these search facilities, however due to time constraints this became impracticable. I consider this as an area suitable for future enhancement.

- Adding an advertisement via the maintenance pages could be improved upon. Using the current system it is beneficial (although not essential) to have some knowledge of HTML when adding an advertisement. For example, if the advertisement has a link to their companies website the following HTML can be entered into the advert to create the link:

   click here to go to companies website .

  As the placement secretary has no experience with HTML, a demonstration of the website and maintenance pages was provided. Some basic HTML was explained and detailed in the user manual (appendix E).

  A number of advertisements received by the school contain attachments, yet there is no facility implemented on the maintenance site to deal with these. Currently if an attachment needs to be added it will have to be placed manually in a publicly accessible place (possibly the placement web server space) and linked to as shown above. A possible solution would be to provide an 'upload attachment' facility, however due to time constraints this could not be implemented.

- As mentioned previously the past placement table is vastly out of date and in need of a refresh, if the front end implemented by this project is going to be useful.

- As the message forum created on the placement website used open source code, the authentication process was different to the method implemented on the maintenance site.
  - The message forum uses cookies to authenticate the user.
  - The maintenance site uses sessions.

  Some work was done to align these different authentication methods, however this was unsuccessful. As a result the user may need to enter their username and password again when the access the message forum administration area. Given more time this issue could have been resolved.

7. EVALUATION

The purpose of this chapter is to discuss the three types of testing carried out on the website: white box testing, black box testing and user acceptance testing. Suggestions will then be made for possible future enhancements that could take place on the website.

7.1 Testing

Testing is the process of making sure that the system produced meets its initial requirements (user and functionality). It is important to note that complete testing is not possible, as you can never guarantee that all errors have been removed. For this project, testing has been broken down in to three specific areas, white box testing, black box testing and user acceptance testing.

7.1.2 White Box Testing

White box testing is a form of logical testing that breaks a system down into its smallest units, testing each possible path in that unit for failure ([11] p. 85). Test data was created to uncover errors in the following paths:

- 'Important' execution paths.
- Error handling paths.
- The handling of data by providing valid data and invalid data.

It proved very difficult to construct a test plan and data that would effectively examine all the possible paths in the code. One of the reasons for this being that there are hundreds of different possible combinations. Therefore testing in this area was carried out at the highest standard possible within the time available.

Examples of tests that were carried out are:

- Testing validation behind all input fields on the maintenance site.
- Testing all error handling mechanisms (e.g. making sure that the website deals appropriately with errors and provides good error messages).
- Testing all search facilities (past placement and job search) to make sure that the results displayed on the screen match what you would expect (e.g. no adverts past their deadline get displayed).
- Making sure that each SQL statement brings back the correct results.
- Validation behind fields on the Placement Agreement Form.

White box testing was carried out along side the implementation of the website. Any errors that were detected have been corrected.

7.1.2 Black Box Testing

Black box testing is designed to test the functionality of the website and uncover any omissions and deficiencies in the way that the website works. This was carried out once implementation was complete and covered the following areas:

- Performance: With database driven websites, response speed can often be a problem. The website was therefore tested to make sure that all dynamic pages and queries provided acceptable response times.
- Security: Access to the maintenance site is restricted to authorised users. Attempts were therefore made to exploit holes in the security of this site. For example using incorrect usernames and passwords or trying to gain access through different pages within the site.
- Recovery Testing: To ensure that the website can deal with a variety of different failures, hardware and power failures were simulated.
- Accessibility: As there is no guarantee which platform or browser will be used to view the website, it was tested under a number of different platform and browser combinations.

A number of trivial problems arose from black box testing, mostly due to the difference in how the browsers displayed the website. All problems found have now been successfully resolved.

7.1.3 User Acceptance Testing

User acceptance testing is the process of getting actual users to test the website. This proved particularly difficult due to the majority of end users not being present within the school at the time of testing.

- **Prospective placement students**

  Implementation of the website was completed at the end of the second term. This meant that the majority of prospective placement students were on vacation and could not test the site. A message was posted on the schools newsgroups, requesting students to have a look at the website and a small number of responses were received. All responses

provided positive feedback on the website with some good ideas for possible improvements. These included:

- Providing information on accommodation in Leeds for returning placement students.
- Providing a 'search by location' option on the job search facility.

♦ **Placement students**

Students currently on placement have been unable to test the website as development and testing took place on an internal web server within the school.

♦ **Placement Staff**

The placement tutor, placement secretary and Mandy Schiffrin reviewed the website. Feedback was positive and many useful comments made. Documentation of these reviews can be found in appendix G.

The placement tutor was pleased with the overall website and made the following comments:

- *"I think you have done a great job, within the time available. There are some things that can be improved, but I would expect to be using this site for real"* Placement Tutor (2002)
- He mentioned that he liked the structure that had been provided and that this was a definite improvement on the current website, although he would possibly change some of the wording.
- He also noted the limitations of the facility to add advertisements (section 6.3) and agreed that improvements in this area need to be made if it is to work to its full potential.

After providing the placement secretary with a demonstration of the site she seemed happy with its functionality and confident in being able to use it.
"I am very impressed, I can't believe you have managed to do so much in such a short amount of time" Placement Secretary (2002).

Mandy Schiffrin (the placement tutor's teaching assistant) was also pleased with the website. *"I've looked through the web pages, you've done a top job, well done"* Mandy Schiffrin (2002).

All functionality errors spotted by the placement staff have now been fixed.

Testing has also been carried out using 3 of the students that were involved in the initial research at the beginning of this project. They were asked to have a look at the site and then answered a number of predetermined questions (see appendix G) that covered the functionality, appearance and contents of the site. All 3 students were impressed with the site.

" I really like the site, I think it is a great improvement on what's currently offered by the school. I would have found it very useful" Returned placement student (2002)

7.2 Future Improvements

There are a number of improvements that can be made to this website in the future. These can be grouped into minor and major tasks.

7.2.1 Minor Tasks

- Better implementation of the current search facilities (past placement and placement opportunities).
- Improve the 'add placement advertisement' on the maintenance site (e.g. providing a facility to upload attachments to placement advertisements)
- Provide more information on finding accommodation when returning from placement.

7.2.2 Major Tasks

- Expand the website to cater for the placement staff's needs. The placement tutor has defined these as:
    - Redesign the School's information system for data about students out on placement.
    - Analyse the data needed for administrative or legal reasons.
    - Provide a facility to e-mail all placement students, check up on which health and safety forms are outstanding, to assist in planning visits to students and to maintain information about expenditure (on visits and other things)

8. CONCLUSIONS

8.1 Project Review

The success of any project is dependent upon whether it has met its original requirements. This review will now examine the outcome of this project in reference to its original minimum requirements detailed in section 1.2.

Minimum Requirement	Project Solution
All placement information.	The website contains all placement information currently available.
News and schedule information.	The website's home page displays the three most recent news entries entered by the placement staff to keep the students as up to date as possible. A timeline of events is also available to provide students with an idea of the structure of the industrial placement scheme.
Online placement agreement form.	The placement agreement form has been redesigned and can now be submitted online.
A method for students to communicate together (E.g. message forum).	A message forum has been implemented on the website to allow students to communicate without any security issues posed by the schools news groups.
Help and advice on writing CV's and attending interviews.	The website contains comprehensive information on writing CV's and performing interviews. It also provides the students with a number of useful links.
Past placement evaluations.	To give the prospective placement students an idea of what to expect from a placement year. Returned placement students have provided online evaluations of their experience.
Facilities for feedback.	Aside from the message forum, the website also provides an online feedback form.
Database driven web pages for placement opportunities.	A search facility has been implemented to allow students to search for available placement opportunities.
Maintainability so that the website can be looked after once I leave.	A maintenance site has been created for the placement site to deal with all maintenance issues.

In addition to the minimum requirements, this project conducted a substantial amount of research. This has been analysed to provide the school with a number of recommendations on how to improve the industrial placement scheme (section 3.7).

As requested by the placement staff, a front end to the past placement table has been created. The placement staff can now make easy updates to this table via the maintenance website. Students are able to query the contents of the past placement table online, although this table is in need of a data refresh before it can be used to its full potential.

8.2 Conclusion

This project began by undertaking a large amount of research to better define the requirements of the website. Once research and analysis of the results was complete, the design and implementation of the project began. On completion of the website, testing was finished and documentation was produced.

This project has been a success in that it has satisfied all requirements specified at the beginning of the project and more. Some of the facilities provide room for improvement, but due to the time constraints enforced on this project, these could not be implemented. User feedback has been very positive and I am satisfied that I have produced a high quality solution that can be used within the School of Computing.

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APPENDIX A

REFLECTION

REFLECTION

The purpose of this appendix is to reflect on my personal experiences in respect to my project. Stating whether I have met my own personal objectives and whether I am satisfies with the project outcome.

The Experience

This project began with a large amount of research to investigate user requirements of the website and the environment in which the website would fit into. This research took up a larger part of the project then I first anticipated and became substantial enough to become a project in itself. If provided with more time I would have appreciated the opportunity to extend this project to include further analysis of my research.

The second part of this project was the creation of the placement website and the underlying database. Having never done any web development before I believe I underestimate the amount of time needed to provide a high quality interface. Implementation of the site ran over by more than a week, however testing lead to fewer errors then anticipated and allowed me to accommodate this extra time. I believe that producing the online questionnaire in PHP also enabled me to get a good grip on the scripting language before implementation of the website began.

Throughout this project I found it very difficult to keep up to date with the current placement process. Having been through this process myself I often misjudged the current situation by confusing it with my own experience. Due to the large turn over of placement tutors in recent years, placement information has become disperse and consequently it was often difficult to acquire the correct version of information.

If I could do it again

Given the opportunity to do this whole project again I would:

- Provide more time for implementation.
- Carry out all research before Christmas to give myself more time for analysis.
- Never assume any information, always ask to make sure that things have not changed.

Personal Objectives

Before I endeavoured on this project I completed a successful year in industry. It was during my year out that I thought about the school's need for a placement website. My experience meant that creating the website was not only a project objective but something I cared about too. I really wanted my work in this project to make a difference and to ease some of the problems I faced during my placement year for other placement students. I believe that both the website produced and the research conducted will be of use and hopefully make a difference within the school.

Having never done any web design before this project, my biggest personal objective was to learn more about web development and subsequently learn the scripting language PHP. I think it is fair to say that I have learnt a lot in the past year, and hope to use my experience in my future career.

Databases are my main area of interest and thus I thoroughly enjoyed all aspects of the database driven side of the website. Aside from putting my existing knowledge to use I was also able to learn a new DBMS (MySQL).

In Conclusion

I consider this project a success on a personal level, as I have reached all my personal objectives. There have been many ups and downs along the way, but I believe that the final solution produced is the best I could have achieved in the time available.

APPENDIX B

PROJECT SCHEDULE

Contents:

- Detailed break down of project schedule.
- Graphical representation of project schedule.

Project Schedule

The project schedule has been split into 6 stages as follows:

- Planning
- Initial Data Collection
- Situation Evaluation
- System Specification
- Implementation of Solution
- Conclusion and write up

Planning:

Task	Start Date	Completion Date
Supervisor assigned and project's feasibility discussed.	12/10/01	18/10/01
Devising aims and minimum requirements of project.	12/10/01	02/11/01
Investigating Data retrieval methods.	12/10/01	26/10/01
Attending questionnaire meeting.	26/10/01	26/10/01
Justification of questionnaire use for approval form.	26/10/01	09/11/01

Initial Data Collection:

This stage takes on two separate phases:

- Understanding of the environment and structure of the industrial placement degree at current.
- Gaining research and user requirements from the students out on placement/ back from placement. Understanding of why the problem exists by keeping track of second year students who wish to take a year in industry. Finally comparing facilities here to those offered by other universities.

Interview staff to find out about the current structure of the scheme Including placement secretary, placement tutor and SIS co-ordinator.	26/10/01	17/11/01
Writing questionnaire and performing pilot study	09/11/01	01/12/01
Refinement of questionnaire and so that it can be sent out.	01/12/01	05/12/01
Performing interviews with students from different universities.	08/12/01	21/12/01
Analysis of questionnaires returned	21/12/01	07/01/02
Exam period, therefore time must be taken out for revision and exams.	07/01/02	23/01/02

Performing interviews with students that have returned from their year in industry.	23/01/02	01/02/02
Analysis of returned mid-project report	28/01/02	30/01/02
Analysis and interview discussions with current second years who wanted to do a year in industry.	23/01/02	01/02/02

Situation Evaluation:

Analysis of all data retrieved	01/01/02	04/02/02
Refinement of project definition.	04/02/02	08/02/02

System specification:

Dealing with interface issues	08/02/02	11/02/02
Dealing with database issues	08/02/02	11/02/02
Dealing with hardware and software issues	08/02/02	11/02/02

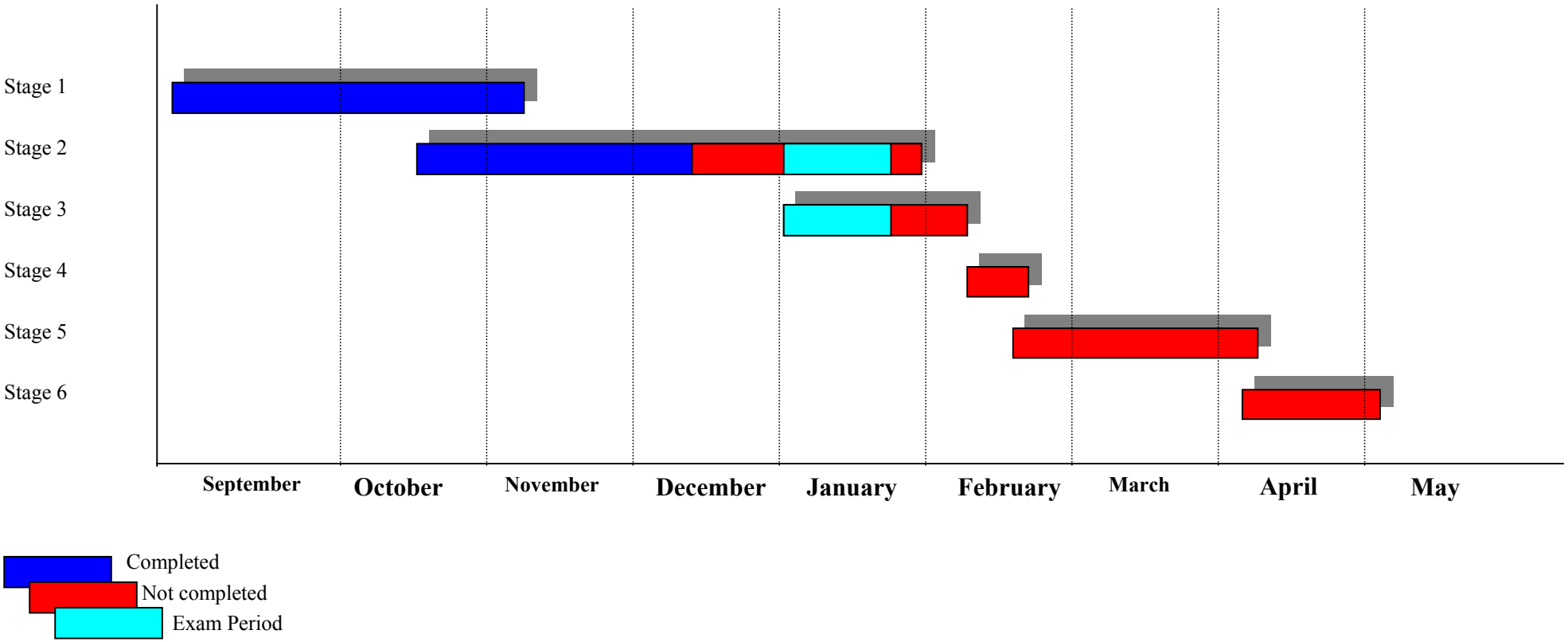
Implementation of solution:

Determine appropriate software engineering methodologies and software tools	11/02/02	15/02/02
Design of website	15/02/02	01/03/02
Implementing the website	01/03/02	15/03/02
Testing (this phase it likely to cause retreat to the previous stage)	15/03/02	21/03/02
Installing	21/03/02	23/03/02
Documenting	23/03/02	28/03/02
Evaluation of website against initial user requirements	28/03/01	02/04/02
Writing up evaluation of website	02/04/02	06/04/02

Conclusion and Write up

Conclude project achievements in reference to objectives.	06/04/02	08/04/02
Evaluate outcome of project and the lessons learned.	02/04/02	10/04/02
Collate all research and documentation into the write up draft of project report. Discuss and refine with supervisor	10/04/02	23/04/02
Finish write up of report and submit along with the deliverables stated in the minimum requirements.	23/04/01	30/04/01

Graphical Representation of Project Schedule



Stage 1: Planning
Stage 2: Initial Data Collection
Stage 3: Situation Evaluation
Stage 4: System Specification
Stage 5: Implementation of Solution
Stage 6: Conclusion and write up

APPENDIX C

QUESTIONNAIRE AND INTERVIEWS

Contents:

- Questionnaire
- Some example returned questionnaires
- Transcript of all interviews

Returned Questionnaire

How did you find out about the industrial placement scheme?

Through the BT website at www.bt.com

What made you want to do a placement?

To gain experience in applying my skills in a professional environment and gain interpersonal skills as well as technical skills. The skills I have/will gain will provide a firm basis upon which to base my final year project.

Rating SOC for introducing placements? Satisfactory

How did you get a placement?

Through an interview at the Bristol office, interviewed by 2 managers.

Facilities used for finding placements:

Placement Notice Board, Placement Website, Careers Fair, Newsgroups, Newspaper Adverts, directory of local companies, company websites, web resources, talking to tutor.

Were you unaware of any facilities? No

Anything you wish you had known before?

Not to panic! Working in a professional environment is not as daunting as you would think, and people are much friendlier and relaxed than some University lecturers, who I now think are pedantic and unnecessarily awkward for no reason whatsoever, who don't provide help when needed, just because "the office closed 5 minutes ago" or for whatever other fake reason.

Rating SOC on whether they provided the necessary information for finding placement: Satisfactory

CV resources used: Looking at other peoples CV, careers fair, searching the web.

Did you feel prepared and confident with interview techniques?

Yes. I just relaxed and talked about the skills I had learnt on my degree programme and my future aspirations. Id learnt various techniques from websites and friends and family.

Do you know of any resources that would help future students: Vast array of Internet sites which help you plan out your strategy. Talking to your tutor and representatives at career fairs.

How can the SOC Improve resources: More workshops and information lectures.

Rate resources for CV and interview facilities: Very Poor

Easier transition:
Maybe have readily available lists of student accommodation in various major towns and cities throughout the UK. Maybe have it up-to-date and available on the SOC website.

Are you aware of all administrative tasks? Unsure

What would you appreciate more information on?
Income tax, Getting student card, final year modules, activities within the school, assessment of placement.

Any worries about returning?
Not really. I have now realised that "actual work" isn't as strict as one would think, and because of this, I am now able to complete work and learn skills in a relaxed manner, which Im sure I will apply throughout my final year work.

Would you like to know other students?
I already know a couple of them, but it would be good to know how everyone else
is getting on.

Do you feel isolated?
A little, because going from the typical student life to going into a 9-5 job is a big transition, and differences are obviously evident, but as soon as you start to settle into work, things just fall into place.

Overall rating: Very good

Extra suggestions:

Returned Questionnaire

How did you find out about the industrial placement scheme?
Notice boards, meetings, and word of mouth.

What made you want to do a placement?
I wasn't ready to do my final year, wanted to gain some real world experience and try to find out what I want to do after I graduate.

Rating SOC for introducing placements? Satisfactory

How did you get a placement?
I responded to an advert placed on the newsgroup. I think it would be a very good idea if this was promoted as a service, i.e. let local companies know about the scheme and invite them to advertise placements on our newsgroups.

Facilities used for finding placements:
Placement Notice Board, Past Placement database, Careers Fair, Newsgroups, company websites, talking to final year students.

Were you unaware of any facilities?
Departmental placement website is new for this year and is now well known about but I did not have use of this facility. Directory of local companies would be a useful resource for the dept to supply.

Anything you wish you had known before?

Rating SOC on whether they provided the necessary information for finding placement: Satisfactory

CV resources used: Looking at other peoples CV, careers fair, Company websites. **Others**: Speaking to family

Did you feel prepared and confident with interview techniques?
Yes but not realy through any assistance that the University provided, there was little if any known help available for mastering interview techniques.

Do you know of any resources that would help future students: A selection of good CV 's and bad CV 's and employer interviews (on-line) where students can ask questions in an informal situation about what is expected from a C.V.

How can the SOC Improve resources: See comments above…….

Rate resources for CV and interview facilities: Poor

Easier transition:
Provide more contact with final year students who have been on placements schemes so that we can get more of a feel of waht is going to be expected from us.

Are you aware of all administrative tasks? No

What would you appreciate more information on?
Income tax, Council tax, Getting student card, final year modules, activities within the school, LCGI Qualification.

Any worries about returning?
Since coming on a placement scheme I have changed my mind about what modules I want to do and I now don 't know what to do. I also would have liked to graduate with more of my friends.

Would you like to know other students?
Yes

Do you feel isolated?
A little, I have had little or no official contact from the uni whilst on placement, however I still live in a student house in Leeds so I do keep up with most of the information. Also I have no access to slrn as the web connection here gos via a proxy server.

Overall rating: Very good

Extra suggestions:

Returned Questionnaire

How did you find out about the industrial placement scheme?
In the University Handbook when applying through UCAS

What made you want to do a placement?
To have work experience behind me before graduating as I had no experience academically in IT before doing this degree, and limited practical knowledge. I also wanted a break from University so thought it was the ideal way to have a gap year.

Rating SOC for introducing placements? Satisfactory

How did you get a placement?
I applied to Ford in the November of the first year. By chance, someone happened to come and just leave some brochures and application forms at the front of one of my lectures and I picked one up through curiosity. There was no real information provided just that 'Ford had a sponsored student scheme which was supposed to be quite good '! Very informative!! As my application was successful I was invited down to Essex for a 2 day assessment centre. I passed that and was offered sponsorship by them.

Facilities used for finding placements:
Apply to companies speculatively.

Were you unaware of any facilities?
At the time I applied yes I was unaware of the majority of the above with the exception of talking to others, company websites and the careers service.

Anything you wish you had known before?
I am extremely glad that I took the opportunity to apply to Ford at such an early stage as I saw everyone else go through mad panics towards the end of the second year about not having a placement sorted. This was even more stressful considering we also had exams to worry about. I would recommend that everyone started to consider their options in the first year.

Rating SOC on whether they provided the necessary information for finding placement: Poor

CV resources used: None

Did you feel prepared and confident with interview techniques?
Not really. I had had job interviews for part time work before but never for something as important as this. The whole experience of the assessment centre was quite daunting as well as I had no idea what to expect. It would have been nice to have had some 'inside information' on the type of exercises/tasks that are expected of you.

Do you know of any resources that would help future students: It would be nice to be able to find out names of students who have been to different companies when you are applying for jobs. I did 3 months work for Ford in the summer between my 1st and 2nd year (18mths work is required before graduation) and I found out then that a student from Leeds Uni was already on the Ford Sponsored Student scheme. It would have been invaluable to have been able to speak to him about the application form and assessment centre before I went through it myself.

How can the SOC Improve resources: Make the services they apparently offer more widely known. I have rated the following statement as 'poor' as I had no idea the services existed.
Rate resources for CV and interview facilities: Poor

Easier transition:
It would be nice to have more complete and detailed information about the issues listed below before we leave University. The one meeting that was held for students going on a placement to give info on admin tasks etc was held at the end of the year in amongst the exams. It would be much more sensible to give us all the necessary information earlier on or at least let us know a web address where it can all be viewed/accessed. A follow up email in the first few weeks of our placement to check that we have all the info we need and that we don 't have any problems would be nice too.

Are you aware of all administrative tasks? Unsure

What would you appreciate more information on?
Getting student card, final year modules, LCGI Qualification, assessment.

Any worries about returning?

After working in the 'Real world' I am very reluctant to return to University. I have learnt more in the last 6-9 months of my work experience than in the 2 years I have spent at Uni so far. I have also found that I have not used any of the skills learnt so far at University which makes you question why you are there!! I feel like I 'm doing a degree just to say that I have one rather than to educate myself!

Would you like to know other students?
It would be interesting to find out how everyones placements are going and the sort of work/conditions they are experiencing so that you can compare them to your own experiences.

Do you feel isolated?
Yes. Communications are very rare if at all!
I realise that staff at the University are extremely busy with students who are on-site but why run a placement scheme if you don 't have the time, resources or processes in place to support it.

Overall rating: Very good

Extra suggestions:
The whole year in industry in my opinion is an excellent idea. I think it provides you, as an individual, with invaluable experience both in industry and the way it works and also in life.

One aspect which I think is appalling and I know I am not alone in my opinion, is the fact that we have to pay tuition fees whilst on placement. Granted we only pay half, but what exactly do we get from the University? We pay approximately £500 pounds for what?? Support? Regular contact? A placement visit? I think not!! It would be interesting to see how the University justifies us having to pay this expense.

Returned Questionnaire

How did you find out about the industrial placement scheme?

Poster in the Long room

What made you want to do a placement?

Break from study. Develop better working practices for final year. Save a bit of money.

Rating SOC for introducing placements? Good

How did you get a placement?

Sent off a CV and Cover letter in response to the poster on the notice board in the long room. Got called for an interview and offered the job later that day.

Facilities used for finding placements:

Placement Notice Board, Careers Fair, Newsgroups, company websites, web resources, talking to tutor.

Were you unaware of any facilities?

Department 's website (I 'm aware of it now, but I didn't realise it was there this time last year)

Anything you wish you had known before?

Only a better Idea of what this particular placement would involve. Nothing from the University's point of view.

Rating SOC on whether they provided the necessary information for finding placement: Good

CV resources used: CV Workshop, Careers service, Looking at other peoples CV, searching the web, company websites.

Did you feel prepared and confident with interview techniques?

Yes.

Do you know of any resources that would help future students:

I found a one-to-one meeting with someone from the careers service to look at your CV and a covering letter very useful. Also, the careers service's booklets on CV writing and interview technique were good (could these be handed out to student early on in the process of looking for a placement?)

How can the SOC Improve resources: I don 't think there 's much more they can do that isn 't already being offered (either by the department of by the careers service).

Rate resources for CV and interview facilities: Good

Easier transition:
The process of informing the University of my placement and 'leaving ' at the end of the year, seemed very informal, and perhaps even disorganised. Formal procedures (perhaps a full information pack with forms to fill in at different stages of the process?) would have made me more comfortable - not because I like forms, or think that they 're always necessary, but because everything else in the University is so structured and bureaucratic that you feel as though you must be doing something wrong.

Are you aware of all administrative tasks? No

What would you appreciate more information on?
Income tax, Council tax, Getting student card, final year modules, LCGI qualification, assessment of placement.
Other: Maintaining access to SOC accounts

Any worries about returning?
I 've heard horror stories about people 's registration when returning from a placement year. Finding yourself not registered for compulsory modules, or finding that due to changes (to degree programme structures / modeul content) while you were away, you 're more limited than everyone else in your choice of modules.

Would you like to know other students?
I 've not felt the need for face to face meetings, I 'd say the newsgroups are sufficient contact.

Do you feel isolated?

Yes, I think mainly because I 've lost access to my Uiversity account and have still not figured out how to access the newsgroups without it (any ideas?)

Overall rating: Satisfactory

Extra suggestions:

There are 3 students including myself on placement here, The others have had quite different experiences of the 'getting a placement ' process, with a lot more 'hand-holding ' by their University 's (suggesting placements to particular students, sending off CVs centrally, organising interviews). I thinks it 's good that SoC doesn 't do this. One of the most beneficial parts of the experience has been having to look for a job yourself. I think the level of support from the department is very good, however I think more planning and information on the stages after you have a placement could be improved upon. Thanks.

Write up of group interviews with returned students

Three group interviews were carried out in total, in order to gain ideas and suggestions on how to improve the industrial placement scheme offered by the school. It was hoped that the outcome of these interviews would provide me with elements to include and enhance the website that I intend to produce. The following is an approximated transcript of the interview discussions. Prior to the interview I devised a list of questions to be used as a basic structure for the interviews.

All interviewee's have been kept anonymous to allow him or her to express their true opinions.

Group interview 1

Date: 01/02/02
Time: 1:00 p.m.
Location: Long Room

A total of 8 interviewee's attended (3 females, 5 males). After initial introduction of myself I conducted the necessary preliminaries.

Myself: How did you all find out about the industrial placement scheme?
Response: A number of different methods were suggested, these are summarised below:

- Through UCAS
- Notice on news
- Word of mouth
- Initial Meeting
- Department open day

It was also noted that a couple of people felt there was confusion with the degree programme in that they applied to do the year in industry through UCAS but when they got to the University their degree's did not indicate this.

Myself: What made you want to do a placement?
Response: Doing a year in industry makes you more marketable as it provides you with experience. Your can acquire contacts that may help you through your final year at University and your career. Used as a 'time out' from the University. Many people felt that

they were not ready to enter their final year and saw the year in industry as a break. Earning a salary was also a high incentive.

Myself: How did you acquire your placement?

Response: Summary of response:

- Interviewee's used careers service
- 1 had their own contact
- 1 used past placement database
- Applied speculatively to companies

Myself: How well do you think the SOC helped you find a placement?

Response: The overall response to this question was negative. Many felt they were let down by the department and felt more should have been done. The following points were raised:

- Not enough information given on the placement scheme. Felt like we were doing it completely off our own backs. This does not mean that we want to be puppy fed! Just that there could be a better balance. There was no guidance and this may be why many people lost interest.
- Our University didn't seem to have contacts with many companies like other universities. A number of interviewee's mentioned other universities and how they had established contacts with different companies.
- There was a lack of support for finding the placement and the University didn't seem to care whether we did a placement or not.
- Not many people knew of the database of past placements and those that did had found out by word of mouth or specifically asking for it. They found that the majority of contacts within the database were useless and out of date.
- No web resources given for finding placements.
- Didn't work in conjunction with the career's service.
- Unsure of what to do when we had found a placement. We needed more organisations.
- After listing of the resources available to them for finding a placement the overall response was that they had not been informed that these facilities existed (for list of resources please see questionnaire). They suggested that if they had known it may have made the job searching easier.

- Not enough help was given on writing C.Vs. Only one workshop was provided.
- There were no resources available to help with interview techniques.

Myself: Were you always aware of the administrative tasks that you needed to carry out?
Response: The interviewee's reported being confused about the administrative tasks they needed to do. Many had little idea of what was going on. The following points were raised in discussion:

- Quote: "I had a lot of hassle getting my union card, this is something that should have been sorted out before we left for our year in industry. It almost felt like the department didn't realise that we wouldn't be in Leeds to pick them up or that we didn't want one."
- Many had problem getting their tax exception form and felt it should have been more organised.
- There was a lot of confusion over why we had to pay tuition fees when many felt there was little to no contact with the University while out on placement. One interviewee reported: "It felt like we were no longer a member of the University."
- LCGI brought about a lot of discussion. Many interviewee's were still unsure what the award was about and how they could get it. Many felt that not enough information was given on this and how to fill it out. Those that had filled it in said that they would have preferred having the forms online to fill in rather then lots of hard copy hand written papers floating about.
- More information needed on how the University assess the year in industry. A few interviewee's remarked that they would have preferred the year out to be marked in some way and reflect on how well you did on your year out. Many felt it was unfair how someone who had had a successful year out had no way of reflecting this in their degree. When asked how they though the University should mark the year out it was suggested that this could be done through the report written by their managers.

Myself: Would you have appreciated an opportunity to get to know other students out on placement?
Response: Most students were in agreement that they would have welcomed a method of getting to know other on the placement scheme. The following points were raised:

- Quote "I would have found it very helpful to have some sort of newsgroup for me to contact other students out on placement. I was often given work on my year out that

required certain technical knowledge that I didn't have. If this newsgroup was around I am sure that I would have used it."

- Many students were unable to use the newsgroups offered by the school (SLRN) because of firewalls that prevented them from telneting.
- Quote " I would have like to get to know other out on placement as I think it may have allowed me to relax more about coming back. I was very worried that all my friends had graduated and I wouldn't know anyone. I think it is strange to think that so few of us went on placement yet we don't know each other. It shows from just sitting around this table, I only knew 4 of us actually went on placement!"

Group interview 2

Date: 04/02/02
Time: 2:00 p.m.
Location: Long Room

A total of 2 interviewee's attended (1 females, 1 males). After initial introduction of myself I conducted the necessary preliminaries.

Myself: How did you all find out about the industrial placement scheme?
Response: Both said that they had know about it before they got to University and then attended the initial meeting to find out more.

Myself: What made you want to do a placement?
Response: To gain experience, a bit of cash and some time out from University.

Myself: How did you acquire your placement?
Response: One interviewee has applied straight to the company from the company website. The other said he found his on the placement board.

Myself: How well do you think the SOC helped you find a placement?
Response: Quote "There was no help! I think it was up to the student to find the placement not the University. I like it that way though as it has helped me with applying for jobs this year. I don't think I am the type of person that like to be spoon fed". Other points made included:

- Possibly more placements advertised.
- University should have more contacts with companies.

- Should have started sooner.

Myself: Were you aware of all the facilities offered to you by the University? (Showing them a list of the facilities)

Response: The following facilities were unknown:

Department website

Past placement database

Didn't make use of tutor

Didn't realise the career office dealt with placements.

Myself: Were you always aware of the administrative tasks that you needed to carry out?

Response: Points raised:

- Not overly clear as to what we need to do and when.
- While at University administrative tasks were okay as we could talk to people if we were unsure what to do. Out on placement there was a lot of confusion.
- LCGI was confusing. Never fully understood what it was all about or whether it was a good idea to do it or not.
- Would have also liked more information on where the £500 tuition fees went.

Myself: Are you happy with how the placement is marked?

Response: Both would have liked it to count towards your final degree, but were not sure what the best way to mark it would be.

Myself: Would you have appreciated an opportunity to get to know other students out on placement?

Response: Both agreed that they would have like to get to know other students as it would have made coming back less daunting. They both suggested that there should have been a meeting when we got back from placements to inform us of things that had changed at University when on our year out or just simply to find out whether we enjoyed our placement.

Interview 3

Date: 07/02/02

Time: 12:00 p.m.

Location: Refectory

One to one interview.

Myself: How did you all find out about the industrial placement scheme?
Response: A few of my mates mentioned it to me so I attended the first meeting, listened to the presentations and decided to give it a go.

Myself: What made you want to do a placement?
Response: I am 24 and felt like I needed experience to be able to get a job when I graduated. I figured this was going to give me that advantage that I needed.

Myself: How did you acquire your placement?
Response: I only applied to two places, which I had got from the placement board and was lucky enough to get one of them.

Myself: How well do you think the SOC helped you find a placement?
Response: The initial meeting said that the University wouldn't really offer very much in finding placements and they were right. I would have preferred more input from my department, maybe a few more meetings to help us along and possibly some advice on which are good placements to go to. Help with writing C.Vs and performing interviews would possibly made our lives easier.

Myself: Were you always aware of the administrative tasks that you needed to carry out?
Response: While at University in my second year things were fine, but as soon as I got out on placement I felt stranded. I didn't know how to start up my computer account so I contacted Kevin McEvoy. I was sent a letter to sign and told I needed to post it back before I could be set up. I didn't hear anything back after that. I also wasn't sure how to get my NUS card and ended up deciding it was too much hassle. Getting my council tax form was bad as well; I had to contact the University numerous times.

Myself: Would you have appreciated an opportunity to get to know other students out on placement?
Response: I think it would have been nice to get to know them although I don't see it as being overly important.

Myself: Is there any ideas or suggestions you have that you think would improve the service offered by the school?

Response: Personally, I feel that the input the University has in finding a placement should be increase. However, I think that the main problem lies with the amount of contact we have while out on placement. We might as well have not been apart of the University. I have had time to cool down now but I wasn't happy about the way we were treated at all. It felt like they (the department) didn't care. I think they really need to get some sort of placement co-ordinator that at least contacts you once in a while, even if it is just a phone call. The organisation seems minimal and I never knew whom to contact when I wanted help. I think the website is a good idea, just a pity know one did it 2 years ago so we could have benefited.

Myself: Thank you for you time.

Write up of interviews with students who wanted to do a placement but never got around to it.

I have spoken to 3 students who are now in their final year that wanted to do placement but never go around to it. The interview was carried out in a group and the approximated transcript is below.

Date: 07/02/02
Time: 2:00 p.m.
Location: **Long Room**

Myself: What stopped you from doing a placement?
Response: The following points were raised:

- Quote " I had no information about doing the placement as I missed the initial meeting due to a lecture, when I asked about it people told me I hadn't missed much and that we didn't really have to do anything yet. Next thing I know I have missed the deadline"
- There was not enough information given on what needed to be done. Two of the interviewee's seemed to be under the opinion that they had to have found the placement before they swapped course and thus felt they had missed out on the chance.
- It was felt by one interviewee that not enough help was given on finding a placement. He was under enough stress with his coursework and couldn't juggle looking for a placement at the some time.

Myself: Do you think the University could have done anything different that would have allowed you to go on placement?
Response: The following points were raised:

- A web form was suggested where you could fill in your details and then get sent advertisements for places that fit the kind of job you wanted.
- It was also suggested that the University increase information on the placement scheme to keep student up to date on the task they need to complete.
- Provide more advertisements from companies and maybe get contacts with companies.
- Provide more information on where the good places are to apply.

Write up of interviews with students from different universities

In order to gain an understanding of how other universities deal with the year in industry scheme I contacted students from 4 universities who had been through the process. As it would be extremely time consuming and expensive to visit these students in person I conducted the interviews over the phone.

York University:

After preliminaries:

Myself: Can you outline the overall process of the year in industry scheme at your University?

Beth: We start the process early on in the second semester of the 1st year where we are required to produce a C.V to hand to our placement co-ordinator.

Myself: Are you given any help writing your C.V?

Beth: Yeah, we have 2 lectures on how to write them, what to put in, what not to put in, that kind of thing. Once we have written our CV, it is checked by Gus (the project co-ordinator) to make sure that it is of a high standard. Over the summer we are expected to apply to at least 5 companies ourselves that we would like to work for. Then when we come back for our second year Gus has lined us each up a number of interviews for jobs that suit the kind of thing we want to do. As Gus' job is solely to look after placement he is able to spend a lot of time going through each CV and making sure that he gets the kind of job we want. He has a lot of contacts with companies and so it was normal for companies to come to the University and conduct interviews there. On some occasions we were required to go down to the company ourselves.

Myself: When do most people get their placement?

Beth: Nearly all of the students on the placement scheme have got themselves a placement by Christmas.

Myself: What facilities does your University offer to help you find a placement on your own?

Beth: Apart from the careers service there isn't really anything else. I think there is no need for it, because we only have to apply for 5 companies ourselves, Gus does the rest.

Myself: What contact do you have with your University while out on placement?

Beth: We get two visits from Gus, one in September to make sure that we are settling in okay and then one in March. All other contact, like choosing final year project and final year modules is done online. If we need anything from the University we just e-mail or ring our placement co-ordinator.

Myself: So how are administrative tasks carried out while you are on placement? Things like getting your NUS card and tax exemption form?
Beth: These are usually sorted out before we leave in the last semester of the second year. If for some reason you haven't got your NUS card then you can apply for it by post.

Myself: How is your placement marked?
Beth: We have to fill in a PDS logbook from the BCS and they then accredit it. We are not actually awarded any sort of grade, we either pass or fail. Although I don't think anyone has actually managed to fail.

Myself: Do you get to know other students on the placement scheme in your department?

Beth: Yes, we have lectures together on writing CV's before we go and then while out on placement the University takes us out for a meal in London altogether to talk about coming back to University. Its good because it means your no alone when you come back to Uni.
No

Myself: Did you like the amount of input your University had in finding you a placement?
Beth: Yeah, definitely it took off a lot of the pressure off, especially when we had coursework deadline and things like that.

Myself: Thank you for your time it has been very helpful

UMIST University:
After preliminaries:

Myself: Can you outline the overall process of the year in industry scheme at your University?
Robert: Nothing really starts till the first semester of the second year. If you want to do a year in industry you have to take a module specifically designed for it. The modules guides you in writing you C.V, building you interview techniques and all other general information to

do with the year in industry. It is along side this module that everyone starts applying for jobs.

Myself: Do you get help with applying for jobs?
Robert: We have to apply for everything ourselves, so it's pretty much the students themselves that have to get on with it.

Myself: So what facilities does your University offer to help you find a placement?
Robert: We have a careers service like normal, but what most of us used was Netwise. It allows you to specify your requirements and then sends you placement opportunities that meet your needs.

Myself: When do most people get their placement?
Robert: Varies really, majority get them end of semester one, beginning of semester two, but I know some people that got theirs at the end of the year.

Myself: What contact do you have with your University while out on placement?
Robert: our placement tutor visits us around the middle of the year out to make sure that everything is okay. All other contact is done via mail or e-mail.

Myself: So how are administrative tasks carried out while you are on placement? Things like getting your NUS card and tax exemption form?
Robert: NUS cards are given to us in our first year and are valid for the whole 4 year course, so that's not a problem. Tax exception forms are mailed.

Myself: How is your placement marked?
Robert: We have to do a report to hand in when we get back from our year out. The in the 1st semester of our final year we have to do a presentation about our placement. These are then marked and go towards your final degree.

Myself: Do you get to know other students on the placement scheme in your department?
Robert: Yes, cause it's a small group so everyone really knows each other.

Myself: Does the University hold any social event or anything like that for you to get to know each other?

Robert: No, I think it is cause of the module in the first semester that you have to take if your are doing a placement. Its not a big class so you get to know everybody. Also they make you do a few team building exercises so that's always a good way to get to know people.

Myself: Did you like the amount of input your University had in finding you a placement?
Robert: I think my University could have done more to help us find the placement, but apart from that yeah they have been fine.

Myself: Thank you for your time it has been very helpful

Manchester University:
After preliminaries:

Myself: Can you outline the overall process of the year in industry scheme at your University?
Dan: You apply through UCAS or can change your course in the second year. We then have an initial meeting to tell us it is time to start looking and its really left to our own devices to go and find our placement. I started applying in November and had got a job by January. That's pretty early for my University.

Myself: So what facilities does your University offer to help you find a placement?
Dan: Notice boards, photocopies of advertisements sent to the University are available, the careers service, there's also a website but there's not much on there in the way of advertisements, more with writing CV's, performing interviews that kind of thing.

Myself: What contact do you have with your University while out on placement?
Dan: Mostly e-mail contact, but we do get visited once in our placement as well.

Myself: So how are administrative tasks carried out while you are on placement? Things like getting your NUS card and tax exemption form?
Dan: I don't think you can get an NUS card when out on placement, but the tax exemption forms were sent to us via post. Selecting final year module is done via a web form, but mine was the first year that they used this.

Myself: How is your placement marked?
Dan: It gets marked but its not reflected in our final degree. There is a clause that if you are on a borderline between marks you can use the year in industry to help push you up.

Myself: Do you get to know other students on the placement scheme in your department?
Dan: No, not really.

Myself: Did you like the amount of input your University had in finding you a placement?
Dan: I fell my University could have done a lot more to help me find a placement. When you compare it to the facilities offered by some other universities, it is really poor.

Myself: Thank you for your time it has been very helpful

Leeds Metropolitan University:
After preliminaries:

Myself: Can you outline the overall process of the year in industry scheme at your University?
Gary: My University has a dedicated placement office to deal with the industrial placement scheme. In the first semester of the second year we have to attend lectures on the industrial placement process every week. These involve information on writing CV's, performing interviews, and filling in our logbooks on our placement, that kind of thing. We have to have prepared the contents of our CV by the beginning of October and then the University put it into their standard template and goes about finding you a job. You are obviously welcome to find your own placement, but most leave it up to the University. There is a notice board with possible job opportunities that you go through, and any you like the sound of you just put your name down and the office will send your CV off for you.

Myself: Does your University offer any facilities for finding your placement yourself?
Gary: Not really, there's the usual careers service, but that's about it. There is also the placement website that has a few helpful links and things like that.

Myself: When do most people get their placement?
Gary: January till about March is about the norm, although I no some that have got them later.

Myself: What contact do you have with your University while out on placement?
Gary: As we have this dedicated office we just contact them directly and they deal with what ever we need. This can be done via e-mail , post or phone. We get two visits from an assessor who comes to check how things are going and talks to your line manager.

Myself: So how are administrative tasks carried out while you are on placement? Things like getting your NUS card and tax exemption form?
Gary: Everything is done by post. It's all very organised; I have had no problem getting things done. There a couple of things that you do via the web like your final year module choice.

Myself: How is your placement marked?
Gary: Our placement is worth 20% of our final degree mark. We get assessed through the log that we have to fill in every month, visits by our assessor from the University and a final report that we have to write at the end of the year.

Myself: Do you get to know other students on the placement scheme in your department?
Gary: Not really, I only know others from already being friends.

Myself: Did you like the amount of input your University had in finding you a placement?
Gary: Yeah, my University has been great, they offer just about the right amount of support and go out of their way to help if you need it.

Myself: Thank you for your time it has been very helpful

APPENDIX D

MESSAGE FORUM TABLES

Contents:

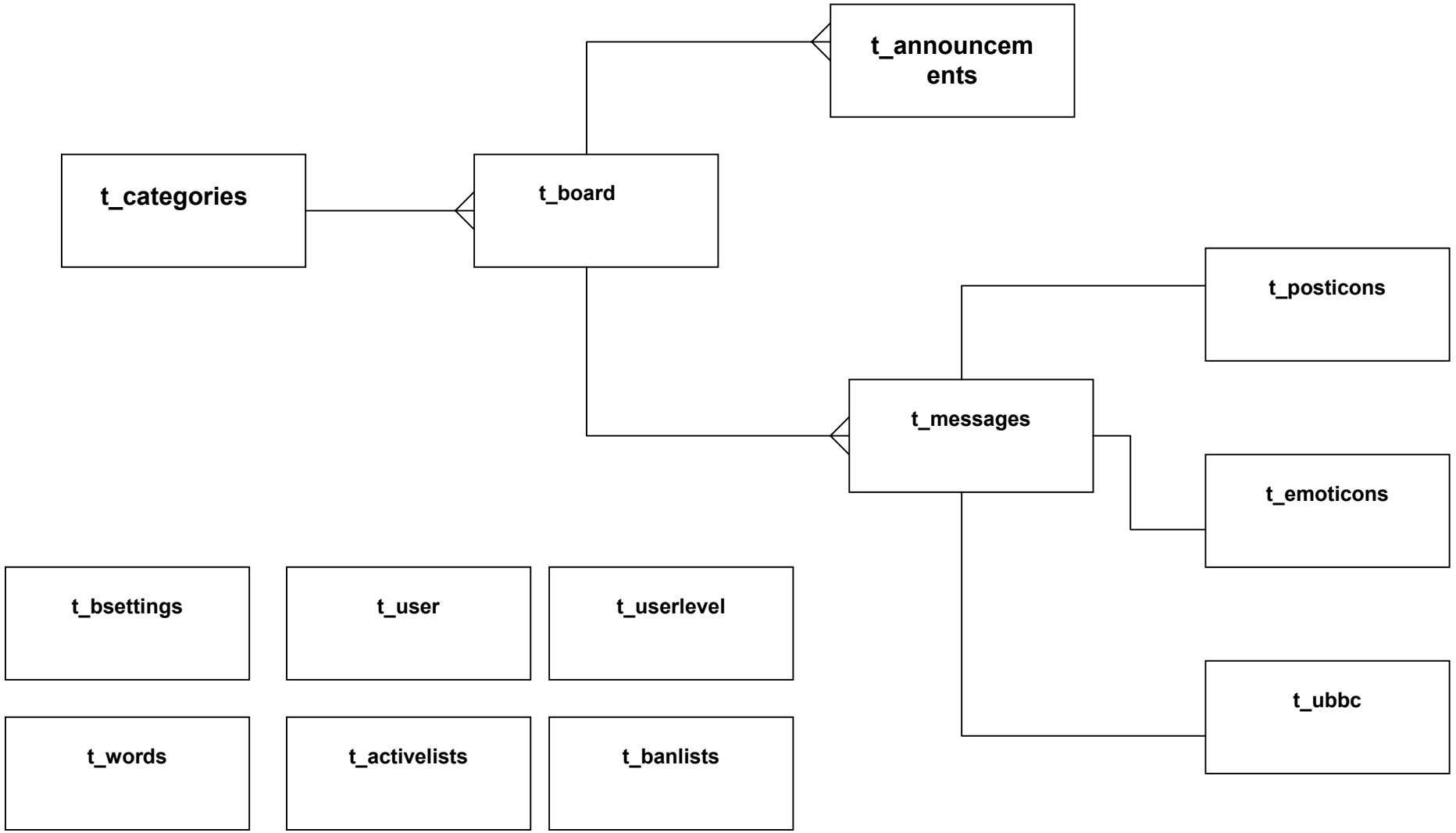
- Explanation of each message forum table
- Message Forum entity/relationship diagram

Message Forum Tables

Below is a table detailing all tables used by the message forum implemented on the placement website (www.csdb.leeds.ac.uk/Forum/index.php).

Table name	**Description**
t_activelists	Contains all active lists in the forum
t_announcements	Contains all announcements made
t_banlist	Contains all banned lists in the forum
t_boards	Contains details of every board create for the forum
t_bsettings	Hold the all the settings for the forum
t_categories	Contains the details of all the categories in the forum
t_emoticons	Contains a list of all the emoticons that can be used in messages
t_messages	Contains all messages and their relevant details
t_posticons	Contains a list of posticons that can be used in a message
t_ubbc	Contains a list of ubbc
t_userlevel	Depicts the user level for each user category (eg member, moderator, administrator)
t_users	Holds details of all users of the messages forum
t_words	Holds a list of all the words that cannot be used in the forum.

Message Forum Entity/Relationship model



APPENDIX E

USER MANUAL

Contents:

- Industrial Placement Website User Manual

The Industrial Placement Website

USER MAUAL

Author: Rosanna Razzaque
Last Updated: 01 April 2002

Contents

1. Introduction

Welcome to the Industrial Placement Website for the School of Computing at the University of Leeds. This is a tailor made website for students within the School of Computing on the Industrial Placement degree programme. It has been designed to cater for all the needs and processes that a student on this degree will have to go through.

The website includes the following functionality:

- All placement information.
- News and schedule information.
- Online placement agreement form.
- A message forum for students to communicate together.
- Help and advice on writing CV's and attending interviews.
- Past placement evaluations.
- Facilities for feedback.
- Database driven web pages for placement opportunities.

This database driven website has been designed with maintainability in mind. Using PHP scripting language on top of a MySQL database the majority of pages are dynamic, allowing updates and changes to be made with ease.

2. Getting Started

2.1 Using MySQL and PHP

The industrial placement website is a database driven website based on the PHP scripting language and a MySQL database. Below is some basic information for each software.

2.1.1 MySQL

Currently the database behind the website resides on the school's database server: **csdb.leeds.ac.uk** . Connection details are as follows:

host: <removed for report>
user: <removed for report>
password: <removed for report>
database: <removed for report>

In order to connect to MySQL, type the following at the shell command prompt:

- mysql –h csdb.leeds.ac.uk –u csyrr csyrr –p

At this point you should be prompted for the password. Currently the version of MySQL used is V3.23.12c –alpha.

Some basic MySQL commands……

To see all the tables currently stored in the database you can use the command:

- SHOW TABLES;

To see the details of a specific table you can use the following command:

- EXPLAIN <table_name>

To select information from any table use the following command

- SELECT <column_names>
  FROM <table_name>
  WHERE <selection_condition>

To update a table use the following command

- UPDATE<table_name>
  SET<column_name>=<new_value>
  WHERE<update_condition>

To delete from a table use the following command

- DELETE FROM <table_name>
  WHERE<delete_condition>

NB. It is very dangerous to update and delete table data by hand. A maintenance website has been set up so that you should not need to do this.

2.1.2 PHP

The website has been created using PHP4. All files ending with the extension .php contain some PHP that needs to be run by the web server before it can be uploaded into a browser. PHP can be embedded directly into any HTML document as long as all PHP code is enclosed between PHP tags. These can take a number of forms, however for the purpose of this website the following tags have been used <? And ?>.

This website has been designed so that you should not need to know PHP to be able to maintain it. However, if you wish to change the structure of the website, basic PHP knowledge will be necessary.

Creation of all PHP files began in Frontpage, where any HTML content was created. Any necessary PHP was then added and the code pasted into a new file with a .php extension. Thus all PHP files for the website have an equivalent .htm file that was used to edit the code in Frontpage. Any changes made through Frontpage to the .htm files should be copied into the .php file (select view HTML, then copy and paste all the code).

A template has been set up for any new page that needs to be added. For more information on this please see section 3.7.

2.2 Installation

While the website is currently set up and ready to run. The following is a set of instructions if for any reason the website needs to be moved.

2.2.1 Moving the database to a new server

To move the database to a new database server, first create a dump of the current database. Type the following at the shell command prompt:

- mysqldump –h csdb.leeds.ac.uk –u csyrr csyrr –p > CreateDatabase.sql

This should create a file named CreateDatabase.sql in your current directory. Running this on the new database server will upload your old database (no data will be lost). To run this script type the following:

- mysql –h <new_host> -u <username> <database_name> -p < CreateDatabase.sql

Once you have moved the database to the new server you will need to change the connection details used by the website to reflect this. Open **connect.php** and **ForumConnect.php** and update your connection details.

Eg.

```
<?
 $host ="<new_host> ";
 $username="<new_username> ";
 $password="<new_password> ";
 $db_name="<new_database_name>";
?>
```

NB. You can only move the database to a server that is running MySQL V3.23.12c - alpha or greater.

2.2.2 Moving the website to a new server

To move the website to a new server all you will need to do is move all the files to the new server. You must make sure that you keep the directory structure the same as before. It is possible that the permissions on the files will need to be set again so that they are readable and executable by all. This can be done on the linux platform using:

- chmod a+rx <filename>

Or on the windows platform by right clicking the file and selecting properties/permissions.

3. Maintenance Website

In order for the website to be as maintainable as possible, a maintenance website has been set up so that all changes to the database can be made via this front end. To be able to access the maintenance website you must be have the administration username and password.

Username: <username>
Password: <password> (removed for report)

Once you are through the initial login procedures you should be taken to the following menu page:

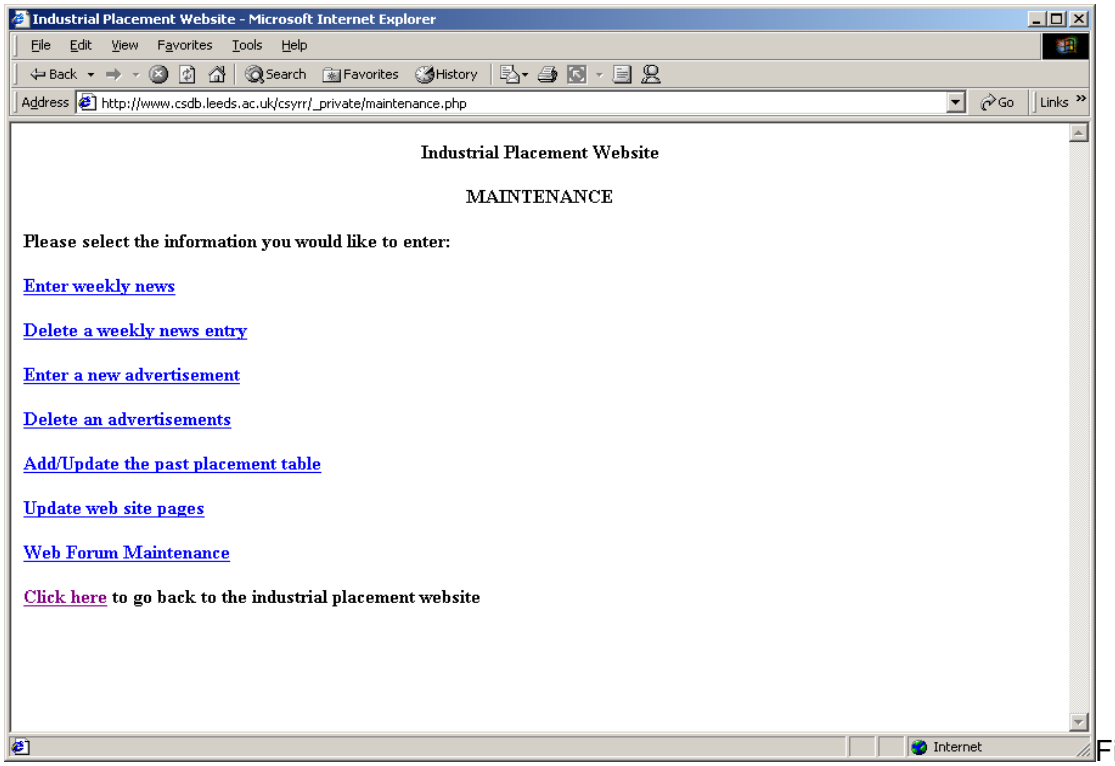


Figure 1

I shall now work through each of these options in turn, giving you the functionality and a brief overview of the technicalities.

NB. The maintenance pages make changes to the underlying database and thus you will be unable to use the back button on your browser. To navigate the site, please use the links provide.

4. Weekly News

4.1 Adding a new news entry

News entries appear on the home page of the website:

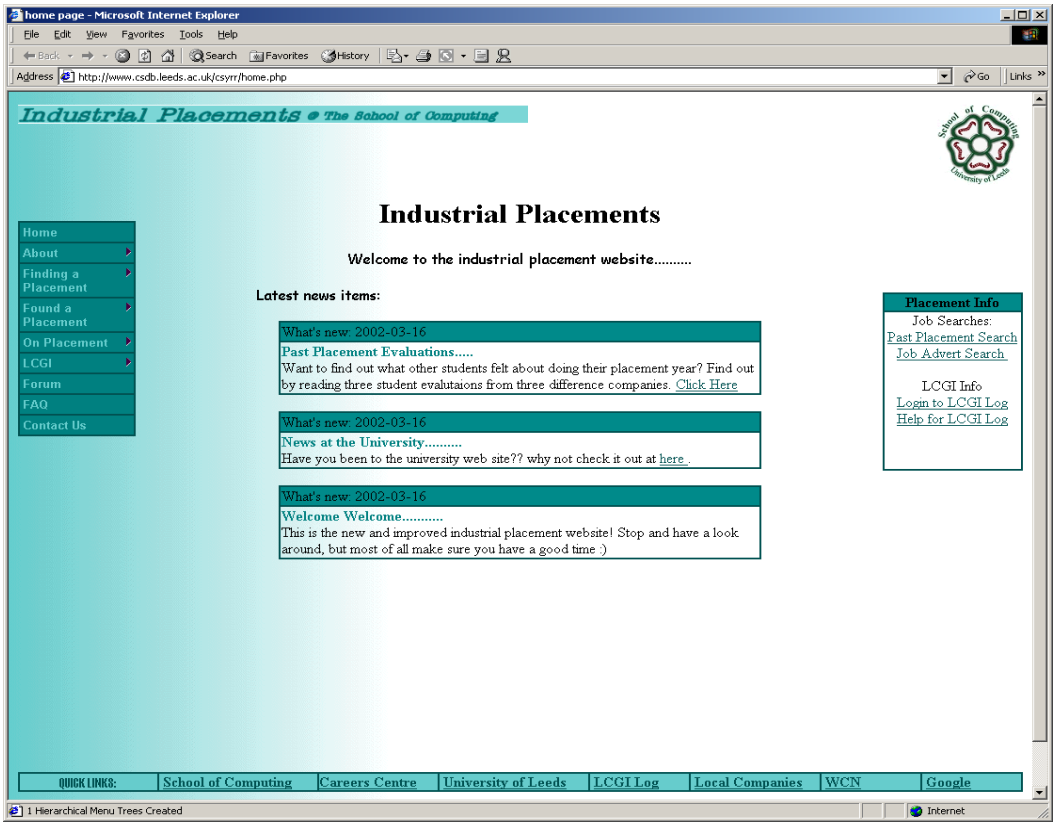


Figure 2

The home page is set up so that it reads the three most recent news items from the database. All news items are stored in the table 'news' and can be added to by using the following page:

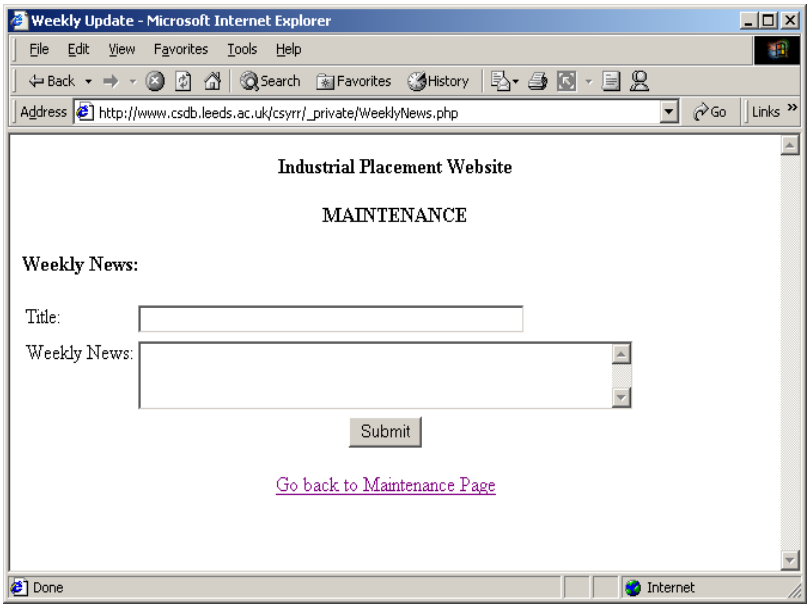


Figure 3

To add a news item simply provide a title and the description and hit submit. If successful you will be given a link back to the maintenance menu. Please note that the title and description can both contain any valid HTML and thus you are able to make links. This can be done by using the hyperlink HTML tag:

Eg: If you want to make a link to www.comp.leeds.ac.uk
You would simply write text you want them to click

Each news entry added is provided with a creation date and a unique id (news_id) to distinguish itself from other news entries.

4.2 Deleting a news entry

It is possible to delete any news entry that you enter. Select 'Delete a weekly news entry' from the maintenance menu and choose the news entry you wish to delete from the drop down list. These are entries are order by their entry into the database, thus the most recent entry will appear at the top of the list.

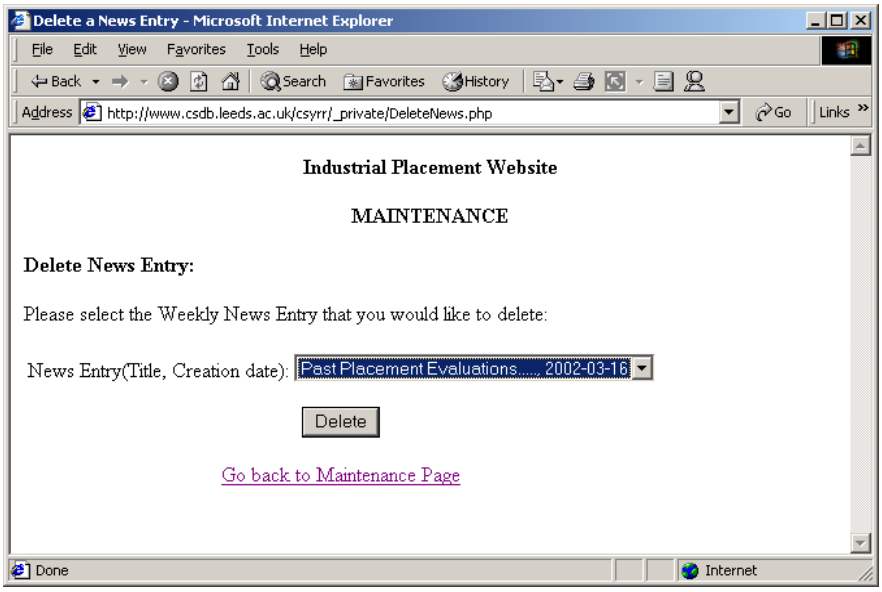


Figure 4

5. Job Adverts

5.1 Adding a new Job Advert

One of the main features of the website is the ability for students to be able to query a table of job advertisements:

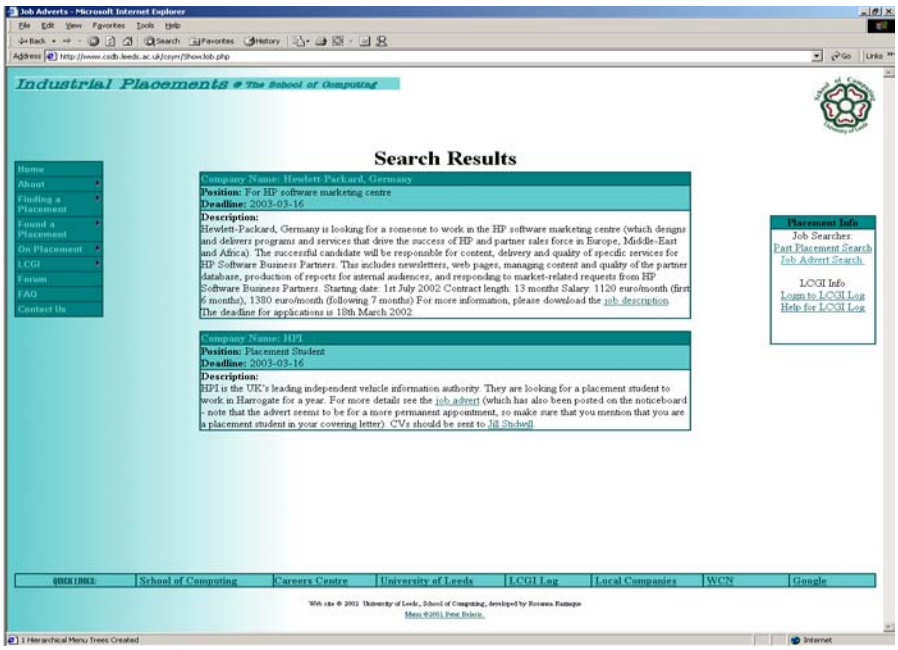


Figure 5

These advertisements come from companies and are normally entered onto local.news. In addition to this, it will be necessary to add each advert to the industrial placement website aswell.

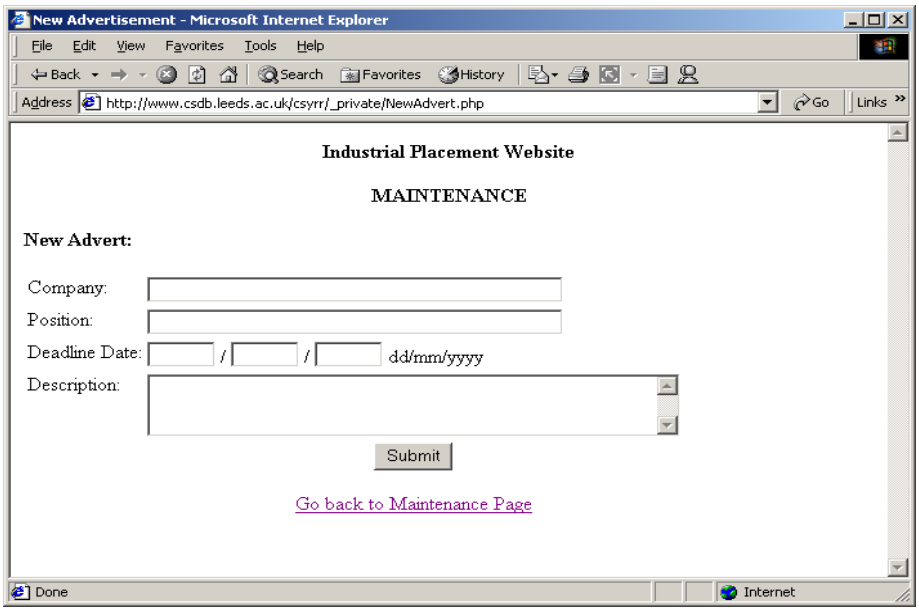


Figure 6

Each advert is entered into the 'adverts' table and given a creation date and unique id (advert_id). If no deadline date is specified a date is defaulted (the default date is one year after the creation date). Once an advert has passed its deadline date it will no longer be viewable through the website, although it WILL still be stored in the table for future reference.

As with adding a news entry, it is possible to enter HTML into any of the text fields. See 'Adding a news entry' for more information.

5.2 Deleting a Job Advert

It is possible to delete any job advert that you enter. Simply select 'Delete an advert' from the maintenance menu and select the advert you wish to delete from the drop down list. All adverts are ordered by their entry into the database, thus the most recent entry will appear at the top of the list.

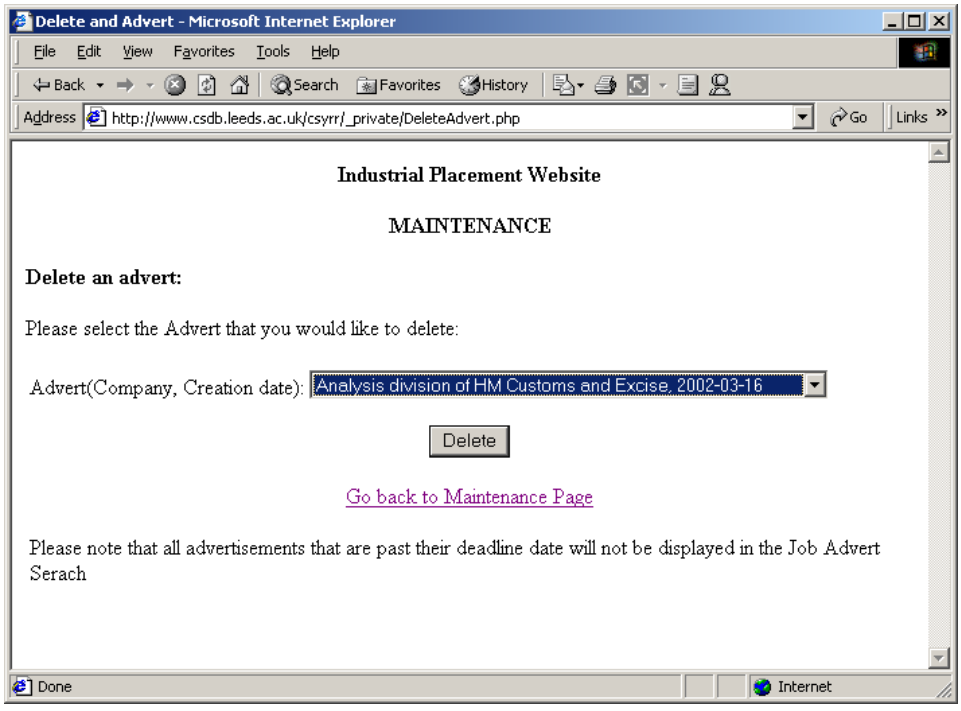


Figure 7

6. Past Placements

The School of Computing currently holds a database of past placements. This used to be an access database stored on the T:/ drive. This database has now been converted to a MySQL table called PastPlacements and has been normalised so that is can be used efficiently through the website. A front end has been provided so that students can query on the underlying database.

Please note that the data in this past placement table is not up-to-date and needs a refresh of information.

In order for past placement records to be changed, an interface has been created to allow new past placements to be entered and old past placements to be updates.

6.1 Add a new Past Placement

To add a new Past Placement to the PastPlacements table simply select 'Add a new past placement' from the drop down list.

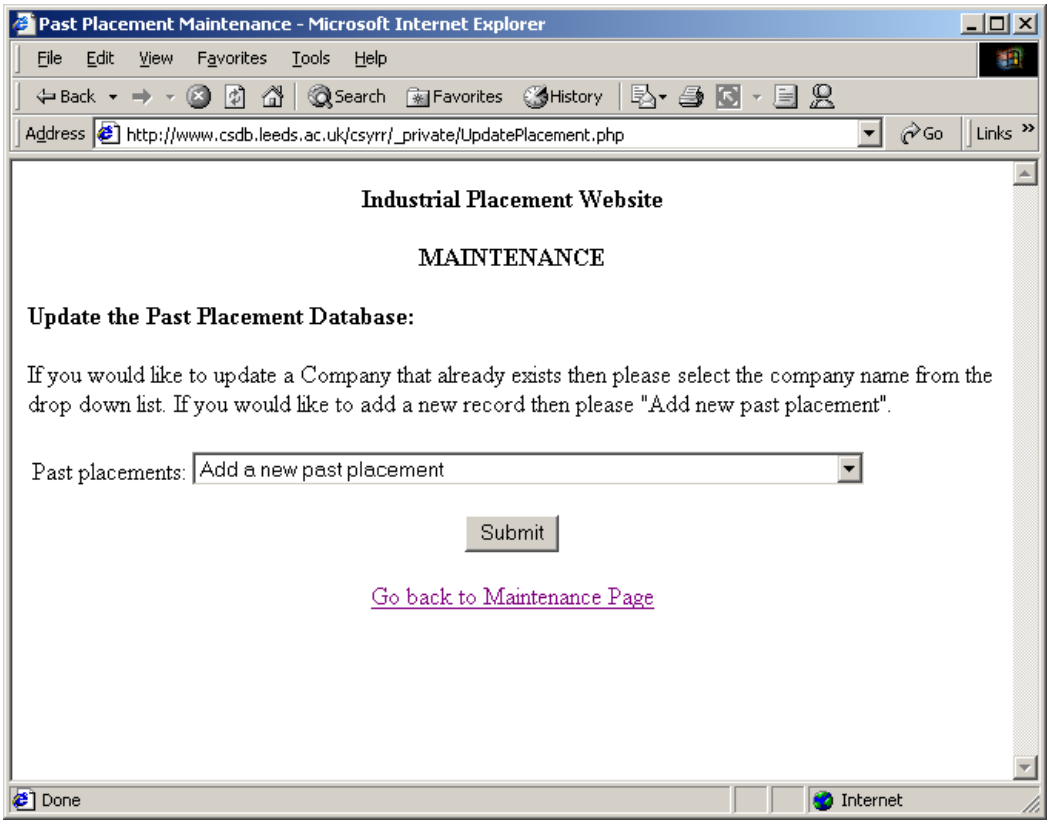


Figure 8

This should the then take you to the following screen:

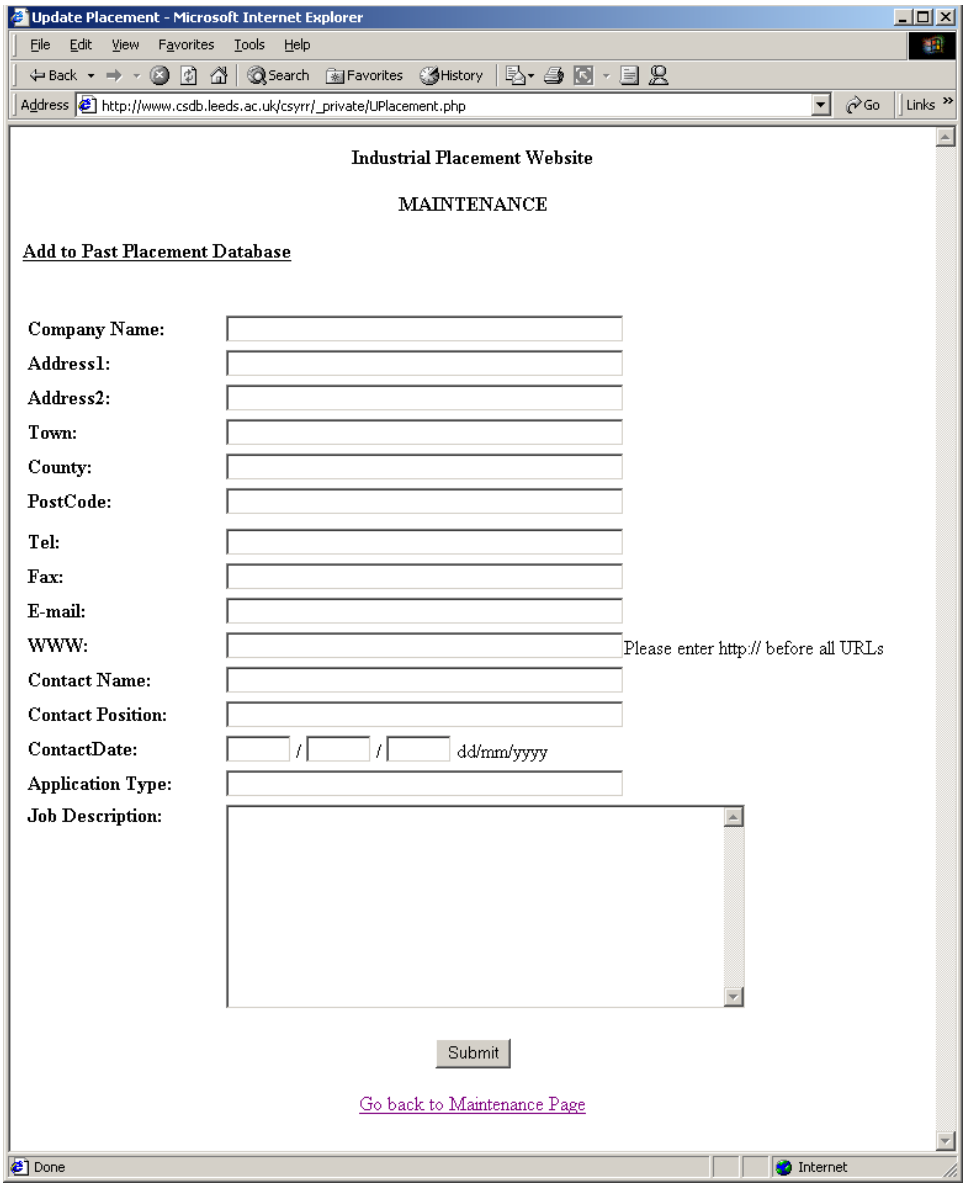


Figure 9

The only field that is compulsory on this screen is the 'Company Name' field, all others will default to NULL or in the case of 'Contact Date' the current date. It is possible to add a company name that already exists as each entry is given a unique Placement_id. This is because a company may have more than one set of contact details. For example a company many have one branch in Leeds and one in London, both dealing with their own applications. If you are unsure whether a company already exists check for its name in the drop down list on the previous page.

As with all other maintenance forms you can enter HTML directly into any of the text boxes. For more information see section 4.1.

6.2 Update and existing Past Placement

To update an existing past placement select the company you wish to update from the drop down list shown in figure 8. It is possible that you will select a company name that has more than one entry in the PastPlacements table. If this is the case you will be asked to select which of these entries you wish to update.

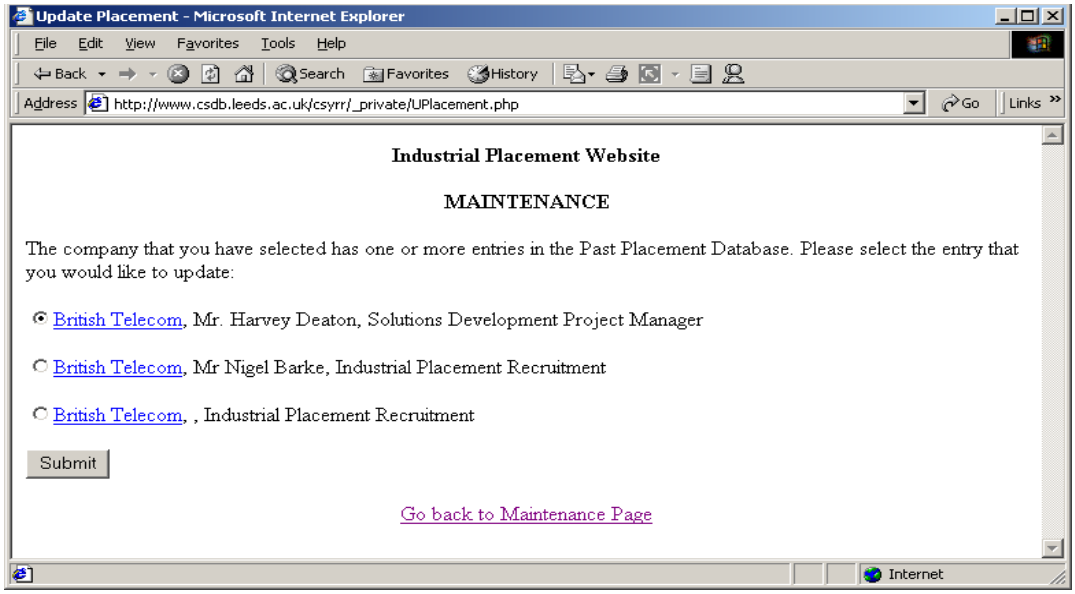


Figure 10

To see all the details stored for each of these entries simply click on their company name. Once you have selected the record that you wish to update you will be taken to the screen shown in figure 9. This time however, all the fields will be populated with what is stored in the database for that record. You can therefore simply make the changes you wish and update the record.

7. Updating Web Pages

In order for this website to be as usable as possible the majority of pages can be updated through the maintenance pages. There is no need for the administrator to know any PHP unless they wish to add more functionality.

7.1 Updating a Web Page

To change the data in a web page, first design how you wish the page to look. All pages fit into the standard template as follows:

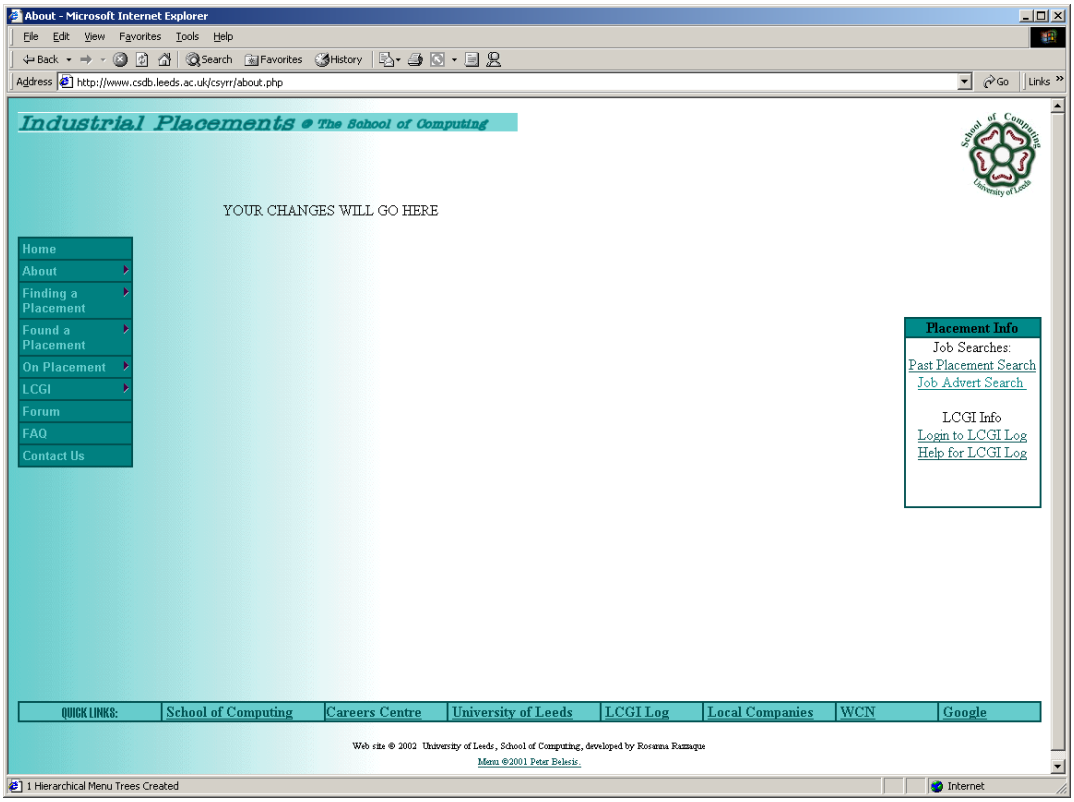


Figure 11

Changing a page data will only change the centre of the page. Once you have designed your page in HTML (or plain text however this provides no formatting) you are ready to update the database.

Select ‘Update website pages’ from the maintenance menu. This should take you to the screen show in figure 12. You should now select the page you wish to update from the drop down list and past your HTML in to the provided text box. You should only paste the code enclosed in the body tags of your page. To not paste in all the HTML headers:

E.g. Only paste code between these two takes <body>…….</body>

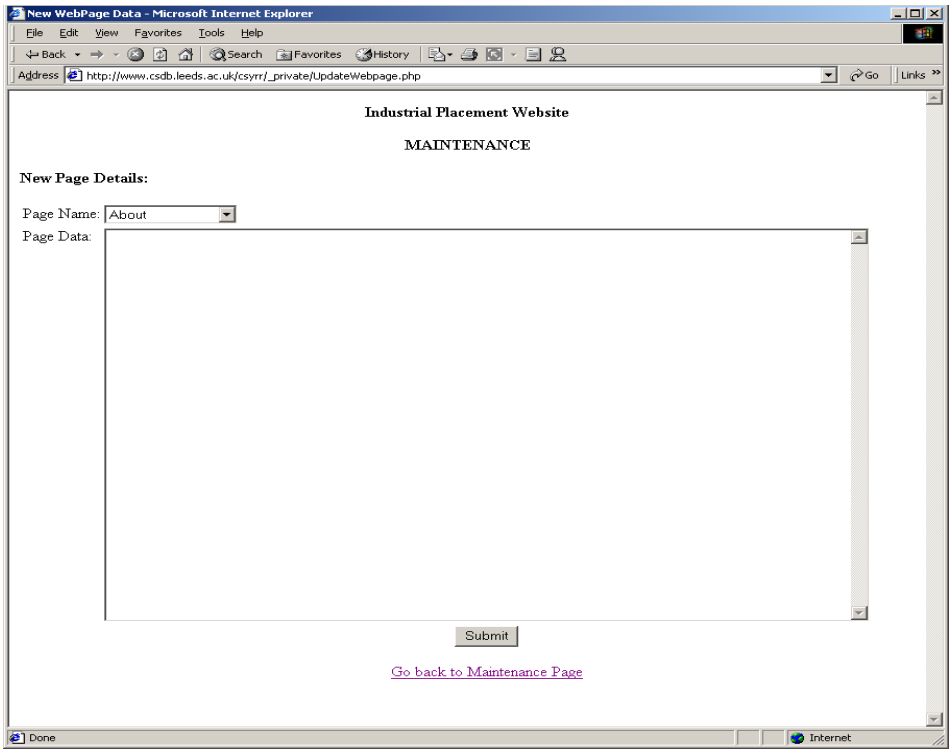


Figure 12

Below is a table showing which page name corresponds to which page:

Page Name	File Name	Page on Website
About	about.php	About / Industrial Placements
PastPlacement	pastplacement.php	About / Past Placement Evaluations
FoundPlacement	found.php	Found a Placement / What to do now
OnPlacement	oplacement.php	On Placement / University Admin
JobSearch	fplacement.php	Finding a Placement / Placement Info
Timeline	timeline.php	Finding a Placement / Timeline Found a Placement / Timeline
CV	cv.php	Finding a Placement / Preparing your CV
FAQ	Faq.php	FAQ, On Placement / FAQ
LCGIDetails	LCGIDetails.php	LCGI / LCGI Information
LCGIHelp	LCGIHelp.php	LCGI / Help for LCGI Log Bottom link on placement info
Interview	Interview.php	Finding a placement / Preparing for an interview
CoverLetter	CoverLetter.php	Finding a placement / Cover Letters
ContactUs	ContactUs.php	Contact Us

Table 1

7.1 Adding a new Web Page

If you wish to add a new web page, template.php has been set up to contain the basic structure of the page show in figure 11. There are a number of steps involved in creating a new page:

Step 1: Make a copy of template.php and rename it to a suitable name (pagename.php).

Step 2: Make a change to line 35 in this file, changing the SQL query so that it searches for your page name and save your changes. Make sure that you set the properties on this file so that it is viewable and executable by all.

Step 3: Change _private/UpdateWebpage.php so that your page name is added as an option (you can not have spaces in your page name). You do this by adding the following line at line 27 and save your changes:
<option> pagename </option>

Step 4: If you wish to access your file through the menu on the website you will need to change HM_Array.js.
This file is set up as a number of arrays. The first array holds all the menu info and the options available on main menu (eg Home, About etc). Each option in this array can then link to another array to hold its sub options.

Eg HM_Array2 holds the following as an option:

["Home","home.php",1,0,0],

The first part of the array holds the name you would like to appear on the menu.
The second part holds the file you would like to link to.
The first number holds a 0 or 1 to switch mouse highlighting on and off.
The second number holds a 0 or 1 to switch permenant highlighting on and off.
The third number holds 0 to indicate no sub menu or a 1 to indicate a sub menu

If a submenu is selected then you would need to create a new array for the submenu with the name: HM_Array2_(position of you option in the previous menu).
You would then add the options as before.

For more information on the menu, see www.dhtmlab.com

Step 5: The final step is to add you page data as you do to update any normal page. See section 7.1 for more details.

8. Web Forum Administration

The web forum on the industrial placement website has been created using freeware. Which has been taken from www.tforumhacks.com/ and has been adapted to fit into the industrial placement website. It is possible to change many of the forum settings through the forum administration. Selecting 'Web Forum Maintenance' on the maintenance menu can access the forum administration. It is possible that you may be asked for you username and password again. This is the same as the Maintenance username and password given in section 3.

Once in, you should be presented with the following screen:

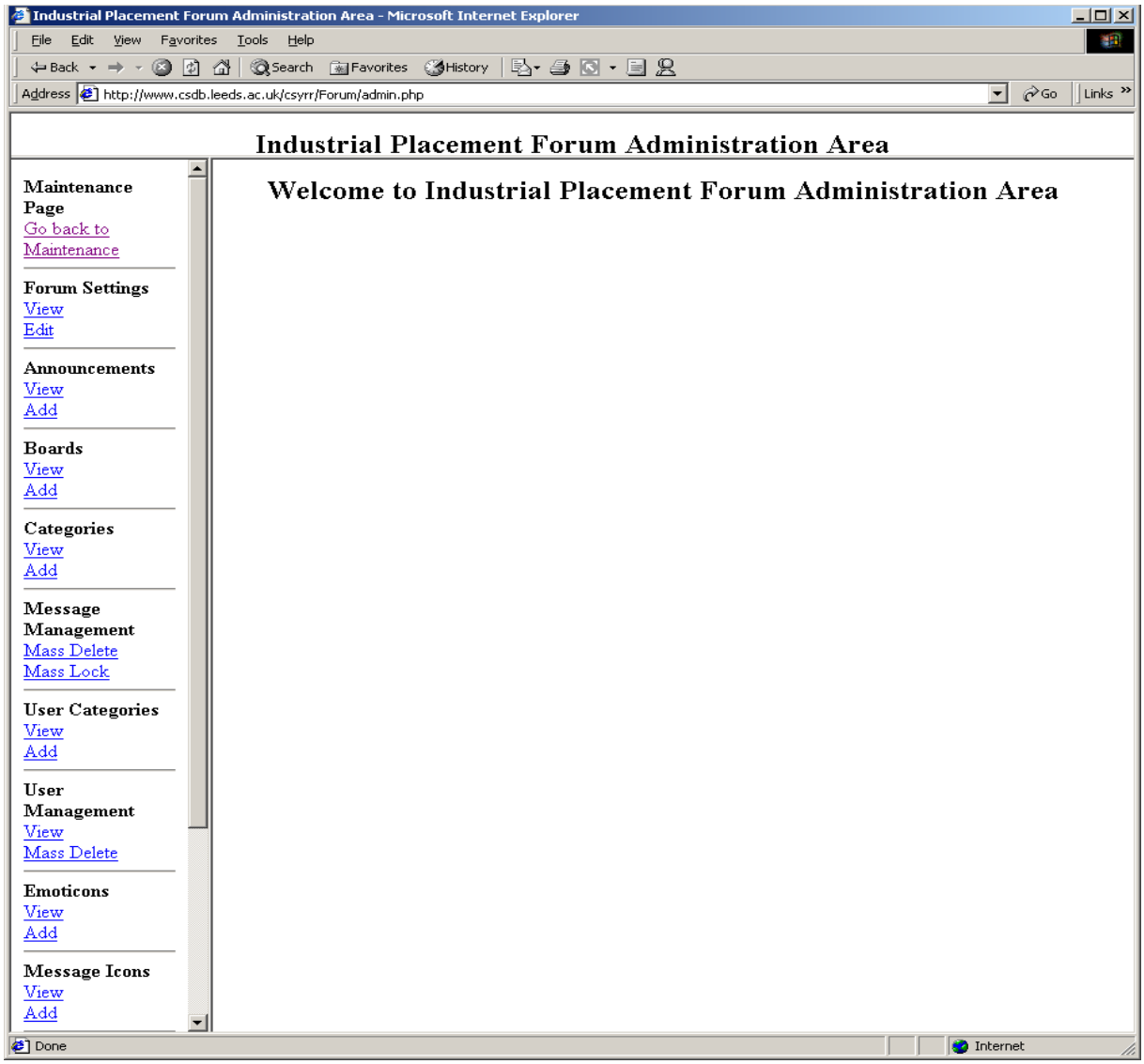


Figure 13

From here you are able to view and update all the forum settings. The Default settings are as follows:

View Forum Settings	
Forum Name	Industrial Placements in the SOC
Site Name	Industrial Placements Website
Site URL	../home.php
Admin Email	placemnt@comp.leeds.ac.uk
Script URL	../Forum
Image URL	images
Enable UBBC	yes
Enable HTML	no
Words Filter	no
Topics Per Page	30
Messages Per Page	30
Background Color	images/bg.gif
Text Color	#000000
Title Background Color	#005151
Title Text Color	#66CCCC
Category Background Color	#008080
Category Text Color	#66CCCC
Message Background Color 1	#66CCCC
Message Background Color 2	#008080
Border Color	#001542
Link Color	#005151
Active Link Color	#0033CC
Visited Link Color	#000000

Currently no moderators have been set up for any of the boards, however this can be changed through 'user management'. Currently the following boards are available:

Name	Order	Category	Description	Moderator(s)	Who can read	Who can post	Who can reply
Administrative Tasks	2	Out on placement	Check this board out for all information on Administrative tasks.		Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest	Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest	Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest
General Discussion	5	Industrial Placement Degree Programme	Got something to say? Say it here!		Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest	Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest	Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest
LCGI Award	3	Out on placement	Check this board out to find out about the LCGI award.		Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest	Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest	Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest
Places to look	1	Finding a placement	Check out this board for information on places to look		Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest	Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest	Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest
Resources	4	Finding a placement	Check this board out for information on resources available to you.		Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest	Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest	Administrator, Moderator, Sr. Member, Member, Jr. Member, Guest

For more information on how to change forum settings see www.tforumhacks.com

9. Common Error Messages

While I would like to say that you would never come across any error messages, the chances are you will so it is important you understand what they mean. There are a number of error messages that I have inserted into my code and I have tried to be as helpful as possible. They are the following:

Error: Couldn't connect

In this case there has been a problem connecting to MySQL. Check first that the database server is up and running. If this is the case then check that you are connecting with the correct connection string. This can be done by checking the connect.php and Forum/ForumConnect.php file.

Error: Couldn't select database

In this case, the database specified in connect.php or Forum/ForumConnect.php is incorrect. Check these files and specify the correct database.

Error: Couldn't execute query

If this error message appears there has been a problem running the SQL statement in the page. It is very unlikely that you will get this error message unless you have changed one of the SQL statements or the database by hand.

Along side my error messages there are also so generic PHP and MySQL error messages that might cross your path. These include:

Warning: Failed opening '/home/filename.php' for inclusion (include_path='.:/usr/local/lib/php') in Unknown on line 0

This is most likely to be your permissions not being set properly and thus the page cannot be found. Change your permissions so that the file can be viewed and executed by all. See installation on page 7 for more details.

Another cause may be that you have you file in the wrong place and it can't find it. Make sure that your URL is pointing to the correct place.

10 .Useful Resources

During the production of this website I have found a number of resources extremely useful. For any problems you are encountering with PHP try:

www.phpbuilder.com

This website contains a number of excellent tutorials and help guides for all your possible PHP queries. There is also a very active support forum if you can't find the answer on the site. As PHP and MySQL go hand in hand there is also a lot of help with MySQL here too.

www.php.com

Provides online PHP manual and downloadable source code.

www.mysql.com

Provides online MySQL manual and downloadable source code.

www.hotscripts.com

This website is great if you want to add functionality to the website without having to code anything yourself (why re-invent the wheel!). This website provides ranked lists of free scripts that you can use.

www.tforumhacks.com

The forum used in the industrial placement website is powered by tforum a freeware. Any problems encountered with the forum should be placed with the active support forum at this website.

The coding style used in the PHP files is similar to that from the following 2 books:

PHP Fast & Easy Web Development by Julie C Meloni (primatech) ISBN 0672317842

PHP and MySQL Web Development by Welling and Thomson (sams) ISBN 076153055

11. System Specifications

This website is designed to run with the following specifications:

PHP 4.1.1

MySQL V3.23.12c -alpha

Apache v1.3.23

APPENDIX F

PLACEMENT AGREEMENT FORM

Contents:

- Newly designed placement agreement form

APPENDIX G

TESTING

Contents:

- Placement tutor's review of the placement website.
- Mandy Schiffrin's review of the placement website.

TESTING

Mandy Schiffrin's Website Review

The following is a e-mail received from Mandy after she had reviewed the website:

From mandys@comp.leeds.ac.uk Sat Apr 27 22:25:14 2002
Date: Mon, 22 Apr 2002 15:12:08 +0100
From: A Schiffrin
To: R Razzaque
Subject: Web pages

Rosie,

I've looked through the web pages and you've done a top job, well done. I do have a few comments for you - would you like to meet up some time to discuss them? I could just email a list of problems to you, but it would be easier to show you! Let me know a good time for you - was it 3.30pm on Tuesdays that you could do? If so, I'll arrange to be in my office tomorrow at that time.

Mandy

After meeting with Mandy, she raised the following points:

- Good structure.
- Menu does not display properly when it comes into contact with the drop down boxes.
- Timeline and feedback form pages don't display properly in Netscape communicator.
- The learning log is not just for students applying for the LCGI qualification. Possibly make it more obvious that this is the case.

John Stell's Website Review

Below is a copy of the e-mail, detailing John's review of the website. All sentences indented by '>' are comments made by John, all other sentences are my response.

From csyrr@comp.leeds.ac.uk Sat Apr 27 22:24:48 2002
Date: Wed, 17 Apr 2002 14:55:47 +0100 (BST)
From: R Razzaque
To: John Stell
Subject: Re: website

John,

Thanks for taking a look. I have been through you points and made changes

where possible. I have documented these below:

> http://www.csdb.leeds.ac.uk/csyrr/about.php
>
> I won't comment on every thing, and I'll probably
> change some of the wording, but overall it looks good.
>
> Is the point about "reduced income tax" correct? Isn't
> everyone not taxed on the first so much of their income?
>

Yep your right, I was getting confused. I have changed the page to reflect this.

> http://www.csdb.leeds.ac.uk/csyrr/faq.php
>
> I don't think the work permit details are correct.
> Fewer students need permission in my understanding.
> See the current placement website:
> http://www.comp.leeds.ac.uk/placemnt/looking.php
> (at the bottom)
>
> FAQ doesn't seem to go logically in the out on placement section,
> but it is also in the main menu

I have removed FAQ from on placements and updated the work permit question to reflect whats on the current placement website.

> http://www.csdb.leeds.ac.uk/csyrr/_private/maintenance.php
>
> watch the spelling: delete an advertisements (no s)

done!

> http://www.csdb.leeds.ac.uk/csyrr/Forum/admin.php
>
> the frames have gone funny here cutting off part of
> Industrial Placement Forum Administration Area
>

I don't seem to have any problem with the frames when I try it. There should be three franes one at the top with the title, one on the left hand side as a menu(which does go off the screen but has a scroll bar) and the main frame for all the data. I have tried it on IE and netscape communicator.

> also i had to type in the password again to get into this
> part why?

This is because it uses a different authentication process. The username and password have been set to the same, but you will need to log in again when entering the message forum admin. (I consider this an area of

possible improvement that I have been unable to fill due to time constraints).

> the names for the user categories don't seem to fit our
> situation "member"?

As the message forum is free code that I have adapted, these are the user categories that are default. You can change the names if you wish. I have left it as it is because not only our placement students will be able to post to the forum and therefore "member" (representing a registered user) seemed most appropriate.

> Click here to go back to the industrial placement website
> this doesn't really go back; it opens up a new window (which may be
> whats needed) suggest wording "go back " is misleading

Changed :)

> I don't understand what update site pages does -- do I have to
> type in (or copy and paste) the whole html for the page?

This is all explained in the user guide, but basically you can devise you page in some editor and then paste all HTML that lies between your

tags into the the box. I have added a link to the user guide on the maintenance site.

> The past placement database: can I just check what you've
> done? I assume that the website is working with a copy of what
> was in the access database and that changes affect this new
> version of the database? If so that's fine.

That’s exactly how it works :)

> I think the addition of new adverts will need a bit of
> work before it could really be used: often there are files
> e.g. job descriptions to be linked in, links to company sites
> etc. This isn't possible for someone without experience of
> HTML to do just using the facilities you provide. I'm not
> expecting you to change this at this stage, but you should
> be aware there are limitations to your solution.

Yep your definitely right, I will make note of this in my report.

> Overall, I think you've done a great job, within the time
> available. There are somethings that can be improved, but
> I would expect to be using this site for real. I think Mandy is
> away on holiday, but when she gets back I hope we can move the
> site to the other server and test it.

Once again, thank you for looking at the website I really appreciate it.

Rosie
--

Research Questions

The following is a list of the questions asked to the 3 students when testing the website and a summary of the responses:

1. Do you like the appearance of the website? (i.e. the use of colour)
2. Is the website too crowded? (i.e. too much information)
3. Is there any information missing?
4. Is the navigation on the site self-explanatory?
5. How would you:
    a. Submit your placement agreement form?
    b. Do a search on the past placement database?
    c. Send feedback to the placement staff?
    d. Find information on interviews?
6. Do you find the search facilities useful?
7. Would you have preferred and indexed list?
8. What is your overall impression of the website?
9. Is this an improvement to the current placement website?
10. Is there anything that you don't like about the website?

Q's	Student 1	Student 2	Student 3
1	"I think the use of colour is good"	"All information is easy to read and it looks well laid out"	Yes
2	"No, I think all the information is important"	"Not really, although you could possibly add some information on the good placements to apply to"	No
3	"Not that I have spotted"	No	"There's a lot of information there, I can't think of anything else"
4	"yes, I like the way it is laid out"	"Yeah the structure is good, very logical"	"seems very simple"
5	Found all information	Found all information	Found all information
6	"I think they are good and easy too use,	"I would have appreciated this facility	"It works fine, although there's a lot of

	although you could possibly provide more criteria to choose from"	when I was looking for a placement"	information is missing in the past placement search"
7	No	No	No
8	"I really like the site, I think it is a great improvement on what's currently offered by the school. I would have found it very useful"	"It's good	"I like it, it's a definite improvement"
9	Definitely	"I didn't even realise there was a placement website"	As above
10	"A part from the search criteria, I can't think of anything else"	See question 2	" I think the online placement agreement form is useful, it might be an idea to put other forms like these online. Like the health and safety form"