CresTech
YOUR TESTING PARTNER

QTKey - Automation Framework

Version 1.0
Implementation Guide

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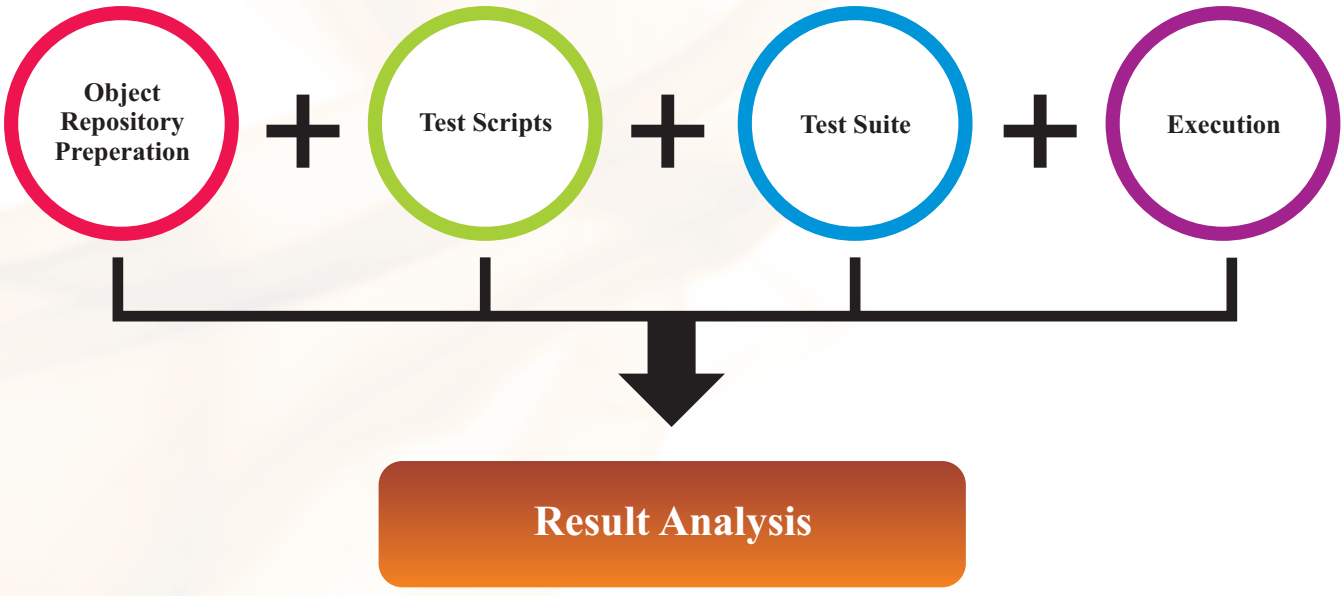
1. Purpose of the Document

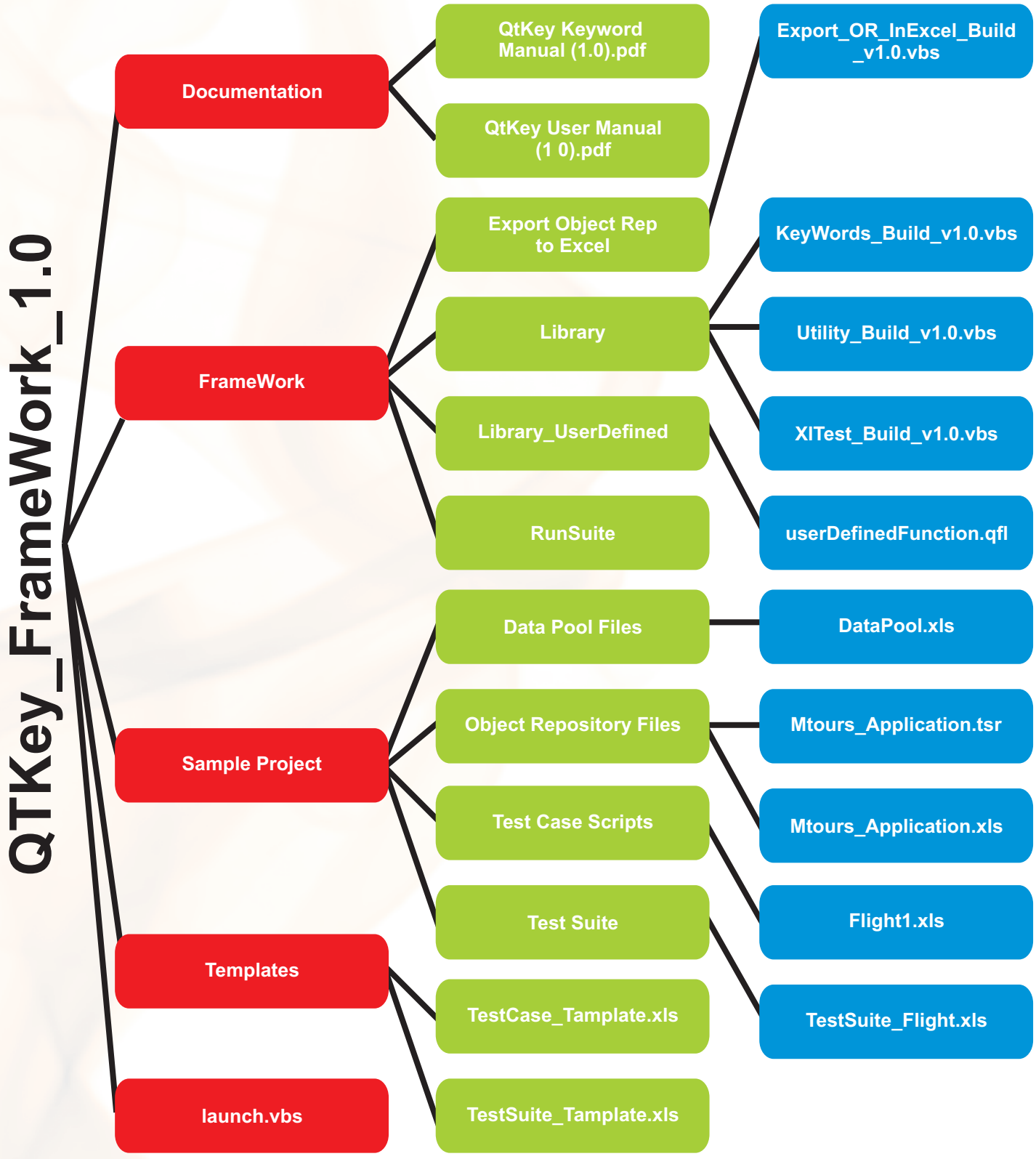
This document is prepared to provide a basic guideline to implement QtKey for testing any standard Web application. This Keyword driven Framework is domain and application independent which performs selected actions and verification. In the keyword driven approach all test scripts are developed in excel that is processed by the main function and executed. Complete automation comprises of following steps:-

1. Object Repository Preparation
2. Test Scripts Preparation
3. Test Suite Preparation
4. Execution
5. Result Analysis



2. Package Content and their Significance

QtKey framework (URL Location) once unzipped will contain following folder and files structure:-



Location of key files:-

File/Folder Name	Locations
Test Suite	QtKey_FrameWork_1.0\Sample Project\Test Suite
Test Scripts	QtKey_FrameWork_1.0\Sample Project\Test Case Scripts
Object Repository	QtKey_FrameWork_1.0\Sample Project\Object Repository Files
Report	QtKey_FrameWork_1.0\FrameWork\RunSuite\Res1
Snapshot	QtKey_FrameWork_1.0\FrameWork\RunSuite\Res1\TestSuite_ Flight_SnapShots
Run Suite	QtKey_FrameWork_1.0\FrameWork

Steps to implement framework:-

1. Extract framework package to desired location.
2. Create object repository for the AUT (explained in detail under section 3.1)
3. Convert the object repository (.tsr) file to excel file (explained in detail under section 3.2) and put it under the object repository path mentioned in above table.
4. Prepare test scripts (explained in detail under section 4)
5. Prepare test suite (explained in detail under section 5)
6. Open Run Suite test case in QTP (Path given above) and start execution.(explained in detail under section 6)
7. Evaluate the result (explained in detail under section 7)

3. Object Repository Preparation

Preparation of object repository is a onetime effort, and users needs to do the following activity:

1. Creation of object repository in QTP (.tsr file)
2. Convert object repository (.tsr file) in excel (.xls file)

3.1. Creation of Object Repository in QTP (.tsr file)

There are two ways to create object repository in QTP.

1. By adding different objects in object repository (OR).

   User should follow the following steps for creating object repository.

   a) Launch the QTP application.

   b) Open a blank test

   c) Access the "Resource Object Repository" Link (Ctr+R)

   d) Click on "Add Object to Local Repository" button

   e) Move hand pointer on object ,and click on object which you want to add in OR

   f) Click on "OK" button of "Object Selection-Add to Repository" pop-up window.

   g) Repeat the steps from "d)" to "f)" for adding more objects in repository.

   h) Access the "FileExport Local Objects…" link and save the object repository (.tsr file).

2. By navigating in web application in recording mode of QTP

   a) Launch the QTP 9.2 application.

   b) Open a blank test

   c) Click on "Record" button.

   d) Navigate in web application (over desired objects)

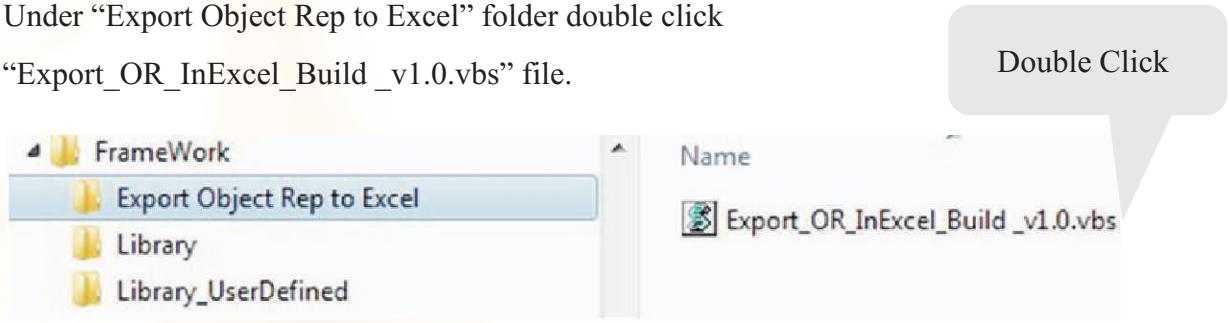
   Access the "FileExport Local Object…"link and save the object repository(.tsr file)

Note: - Detailed steps to create object repository for the new users can be found in QTP tutorial (http://thinh1808.files.wordpress.com/2008/03/qtp-tutorial.pdf)

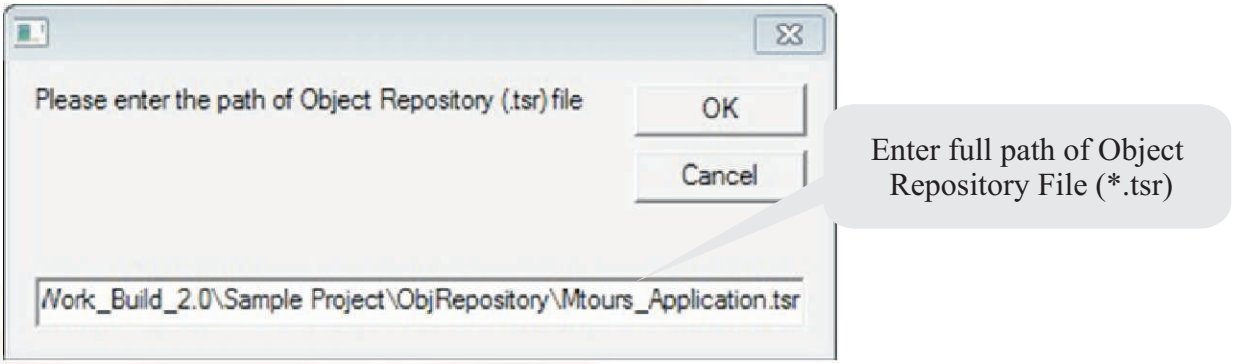
3.2. Convert Object Repository (.tsr file) in Excel (.xls file)

User need to convert object repository (.tsr file) in to an excel sheet (.xls file). For converting the object repository user should follow the following steps:

a) Under "Export Object Rep to Excel" folder double click "Export_OR_InExcel_Build _v1.0.vbs" file.



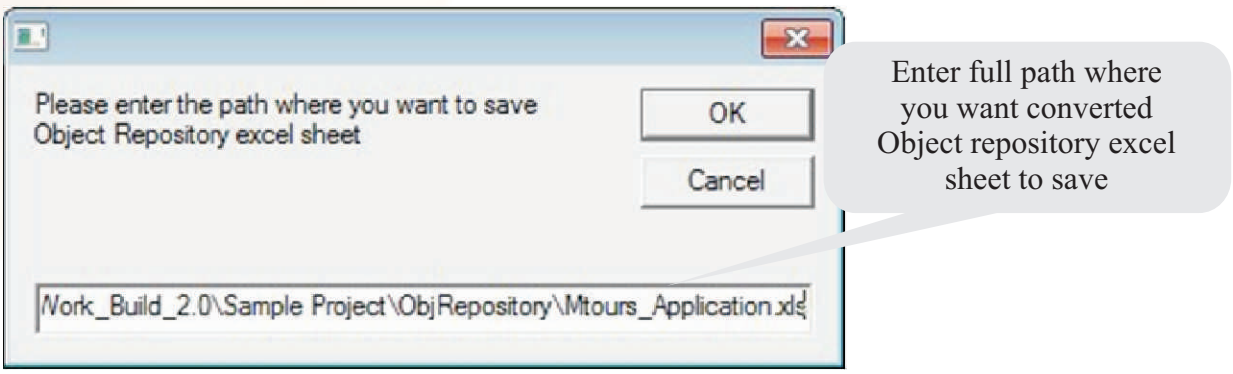
b) Enter the full path of object repository file (.tsr) which you want to convert.



c) Click on "OK" button

d) Objects in the .tsr file will get listed with its properties in the form of excel sheet.

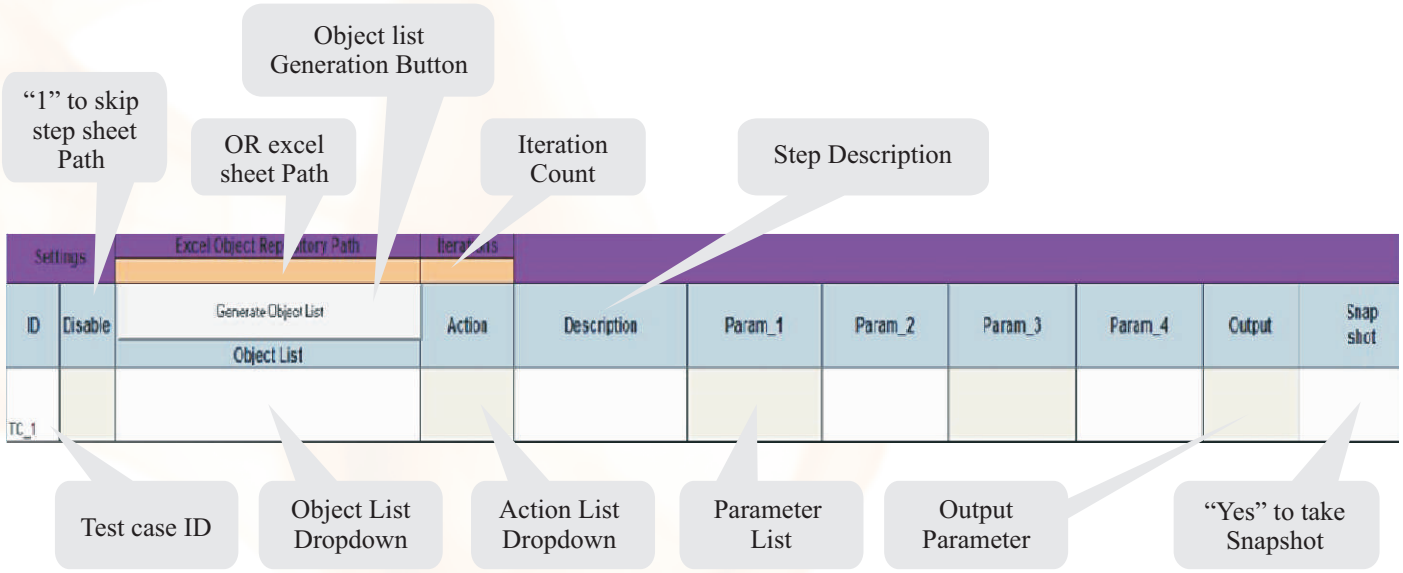
e) Enter the full path with object repository name (.xls) where you want to save converted object repository.



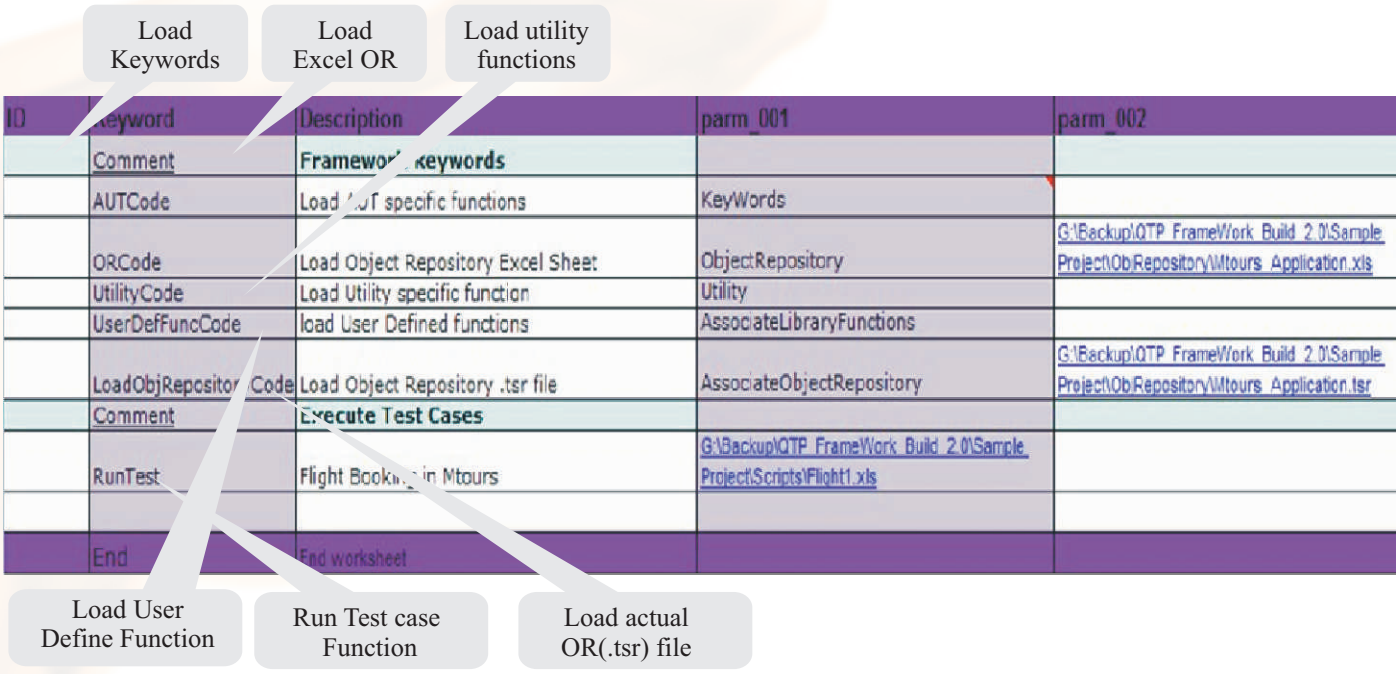
4. Test Preparation

User need to prepare following two excel sheets:

Test Case



Test Suite

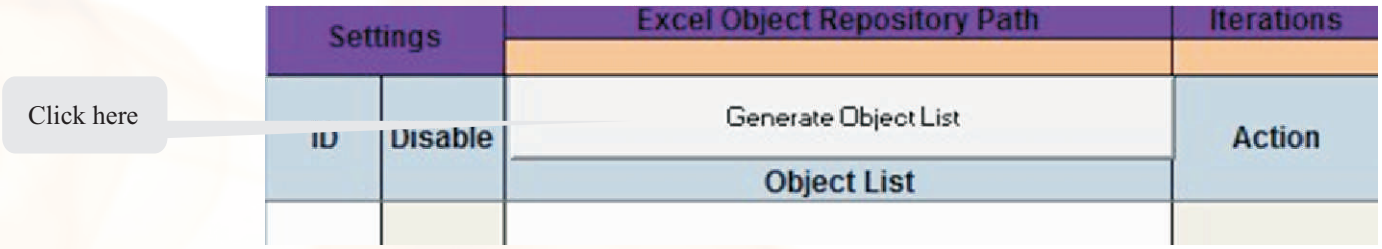


4.1. Test Case Preparation

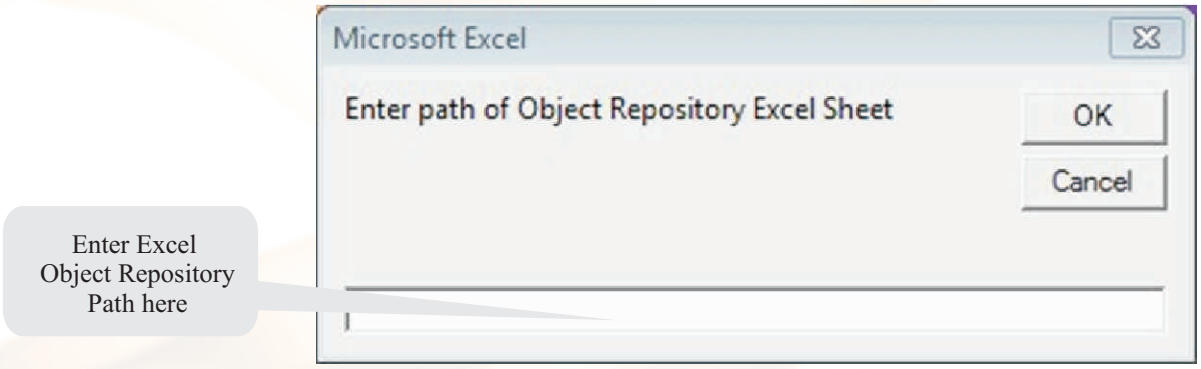
For test case preparation, user needs to do following activities:

4.1.1. Generate Object List

a) Click on "Generate Object List" button on test case template.

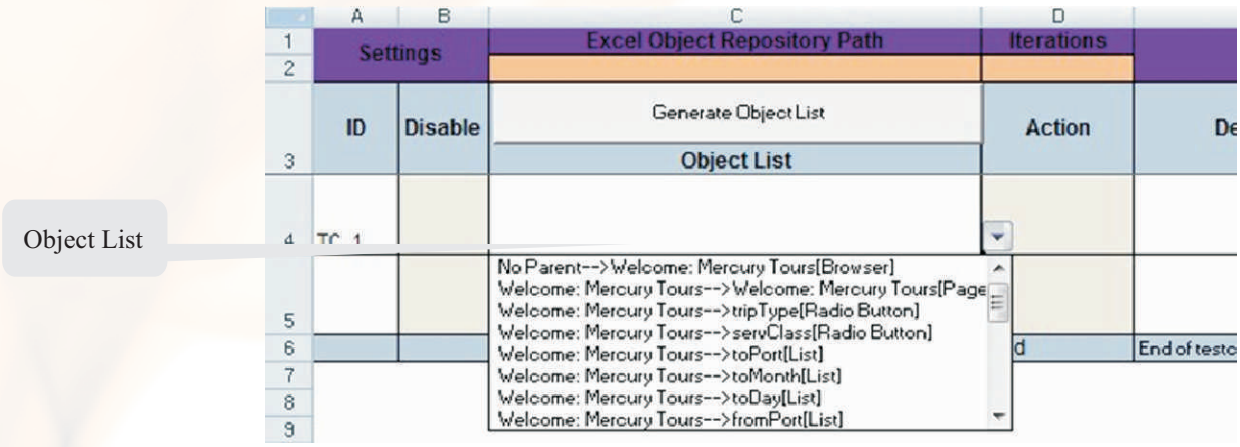


b) Enter the path of OR (.xls file) in message box.



c) Click OK

d) All objects in OR will be displayed in the dropdown.

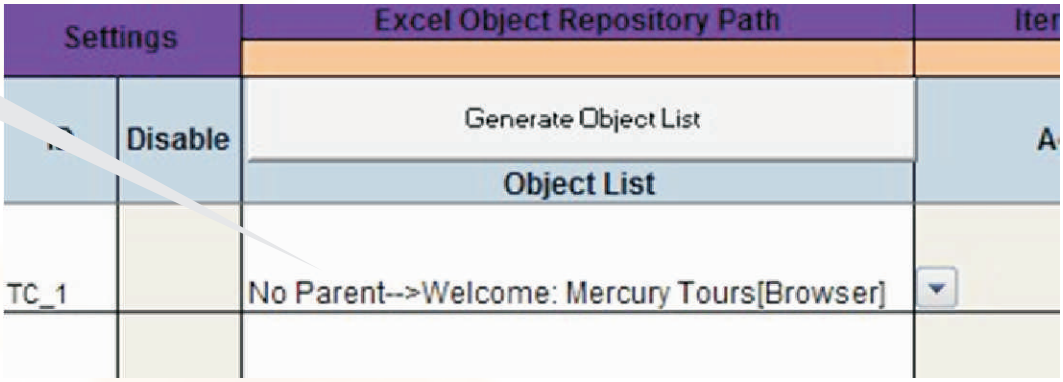


e) Drag first cell of "Object" column in test case template up to last cell of the same column.

4.1.2. Select Objects

Each keyword requires object reference for which user need to select an Object from the dropdown on each cell of "Object" column of test case template.

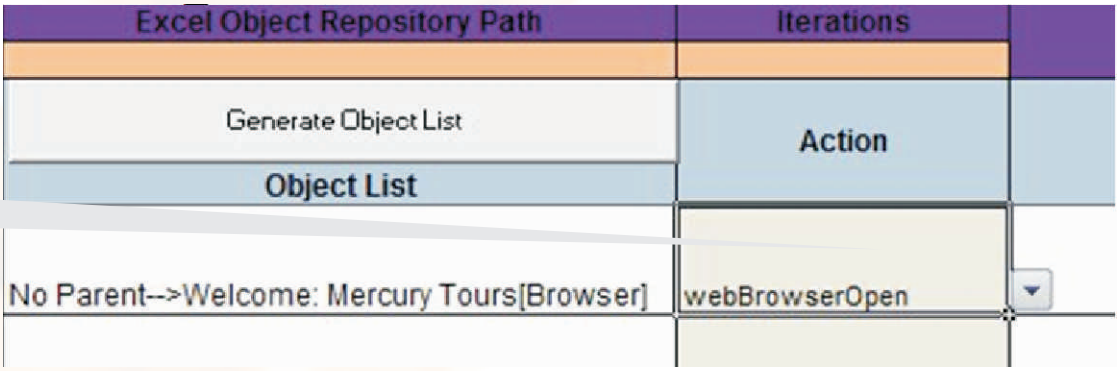
Select Object from the list



4.1.3. Select Keywords

User need to select keyword from dropdown on "Keyword" column of the test case template, so that action can be performed on the object. Refer available keyword's details from "KeyWord_Repository.xls file

Select correct keyword from the list



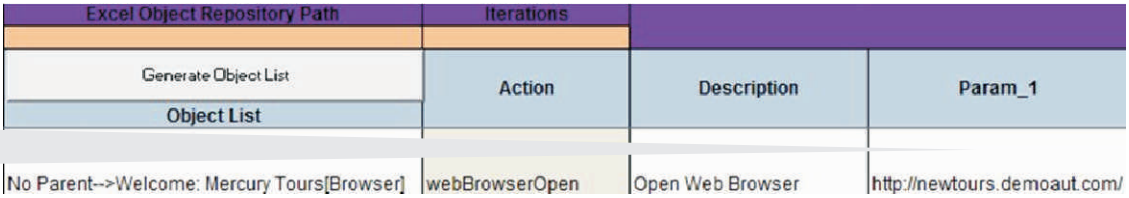
4.1.4. Enter Parameters

There are some keywords which required some value to perform action. So user need to give parameter for those keywords in "parm" column in the test case template.

For example:

1. "editField" keyword requires some text such as "name3" etc.
2. "webBrowserOpen" keyword requires URL such as "https://www.gmail.com."

Enter value corresponding to object and action



4.1.5. Select Snap Shot Option

This gramework can take the Snapshot of each step of test case, for which user required to mark as "YES" in the last column (snapshot) of each row.

Note: User can skip any keyword action by entering "1" in disable column.

4.2. Test Suite Preparation

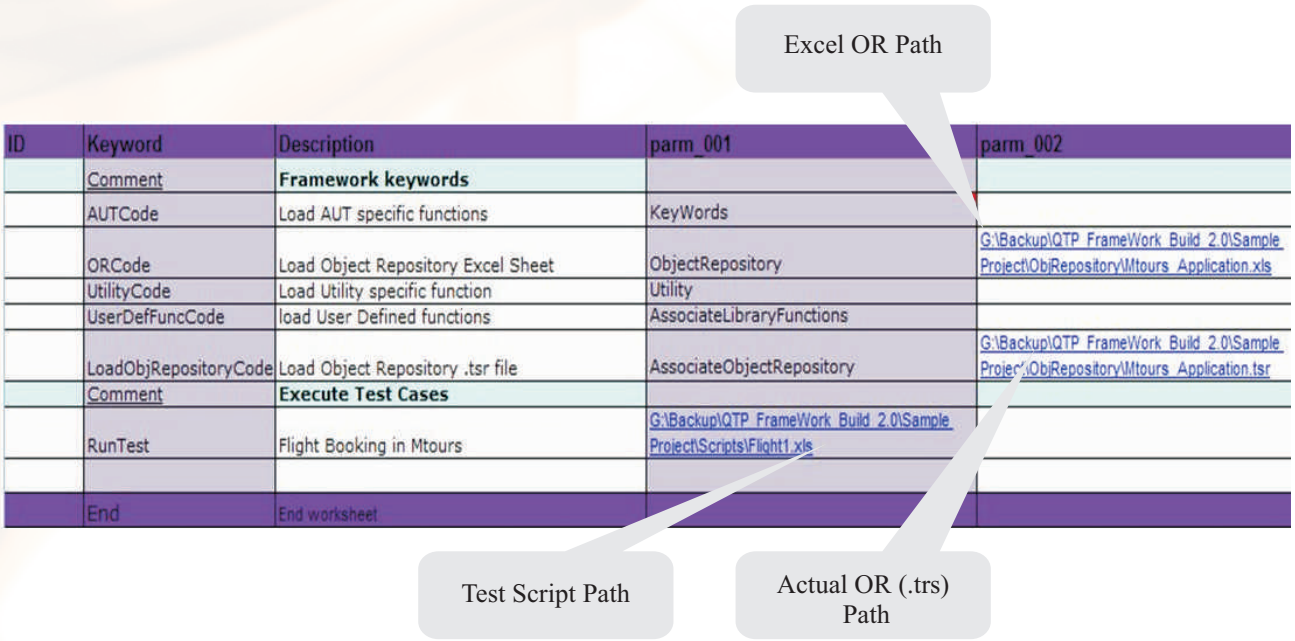
For execution of test cases user required to create test suite in which user give the path of "OR" and "Test case".

Step to create test suit are as follow:

a) Enter the path of OR (.xls file) in the "parm_002" column in test suit template. This "OR" path must be on the same row in which "ORCode" keyword written.

b) Enter the path of OR (.tsr file) in the "parm_002" column in test suit template. This "OR" path must be on the same tow in which "LoadObjRepositoryCode" keyword written.

c) Give the path of test case (.xls file) in the "parm_001 "column in test suit template. This test cases path must be on the same row in which "RunTest" keyword written.

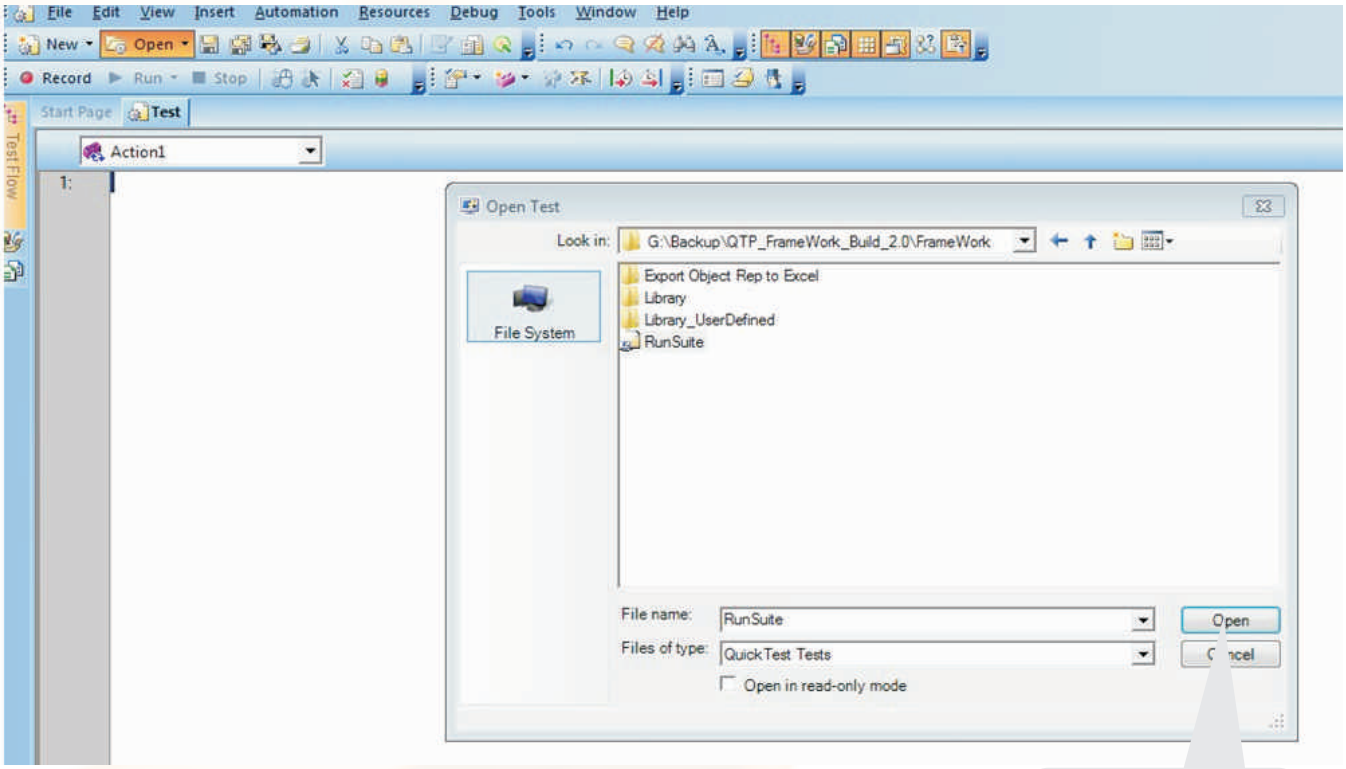


ID	Keyword	Description	parm_001	parm_002
	Comment	**Framework keywords**		
	AUTCode	Load AUT specific functions	KeyWords	
	ORCode	Load Object Repository Excel Sheet	ObjectRepository	G:\Backup\QTP_FrameWork_Build_2.0\Sample Project\ObjRepository\Mtours_Application.xls
	UtilityCode	Load Utility specific function	Utility	
	UserDefFuncCode	load User Defined functions	AssociateLibraryFunctions	
	LoadObjRepositoryCode	Load Object Repository .tsr file	AssociateObjectRepository	G:\Backup\QTP_FrameWork_Build_2.0\Sample Proje\ObjRepository\Mtours_Application.tsr
	Comment	**Execute Test Cases**		
	RunTest	Flight Booking in Mtours	G:\Backup\QTP_FrameWork_Build_2.0\Sample Project\Scripts\Flight1.xls	
	End	End worksheet		

5. Run Suite

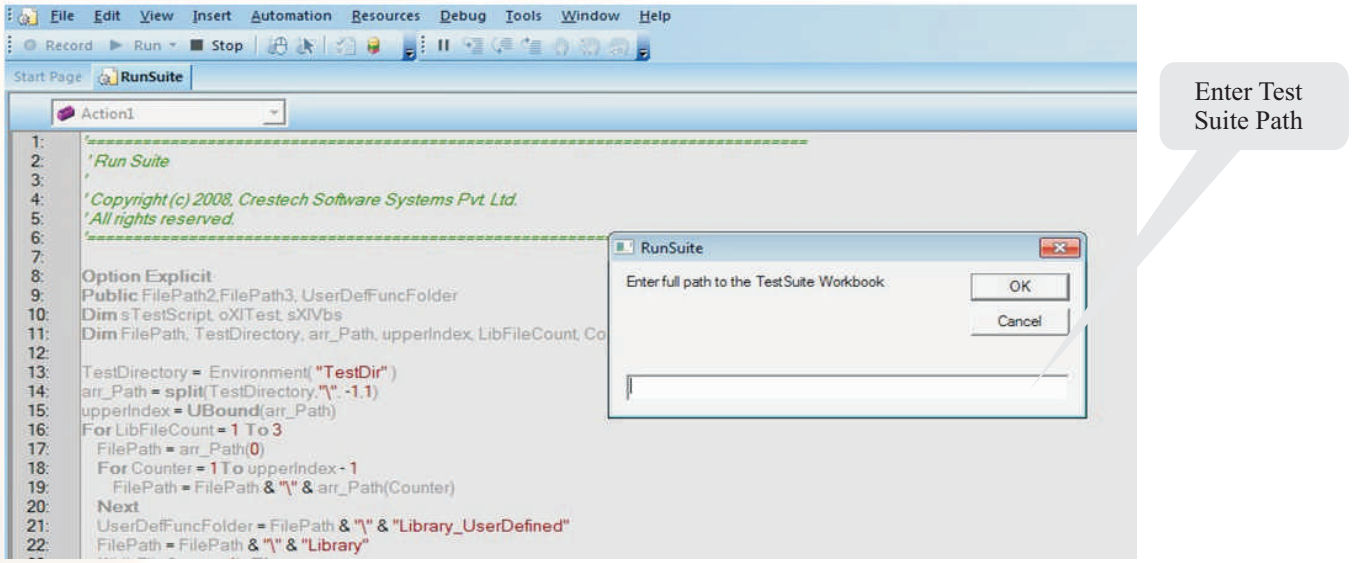
To run the script user required have to do the following step:

1. Open the "RunSuite" test case in QTP (Found in QTP_FrameWork_Build_2.0 > Framework)

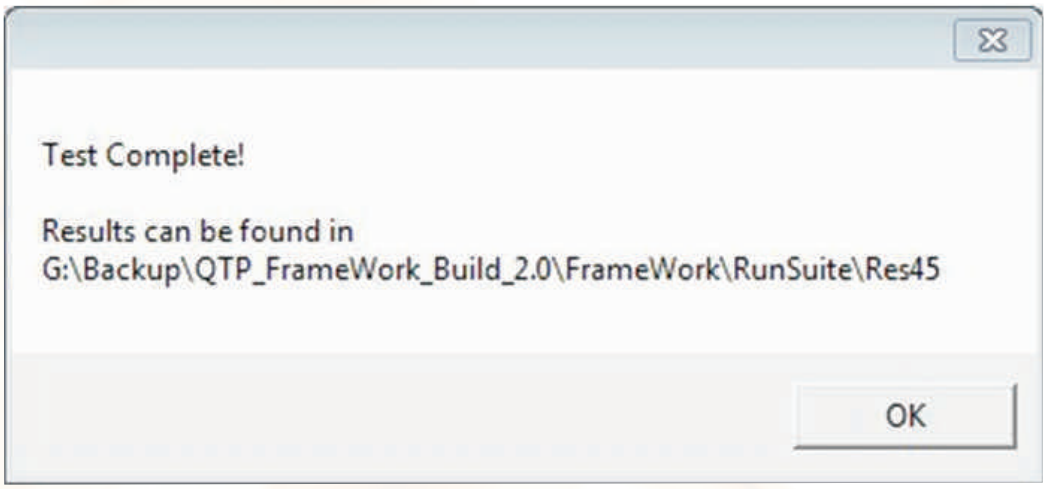


2. Click on "Run" button at the QTP tool bar (Press F5).

3. Framework required the test suite path for which a new message box generated, in which user has to enter the path of test suite.



4. Message box will be displayed once the complete execution is finished. It will show the path where user can find the test results, MsgLog and snapshots.



6. Analysis Result

User can find the run result from ResultDir in environment setting. This folder contains all the logs, test results and snapshots.

7. Known Issues

1. Framework does not handle exception.
2. For QTP version higher than 9.2, execution of file “Export_OR_InExcel_Build _v1.0.vbs” throws an error, which can be ignored.