

Software User's Manual

Mobile Controlled Lighting System

Team 13

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Version History

Date	Author	Version	Changes made	Rationale
11/19/14	AS	1.0	User instructions	Initial draft for use with Mobile Controlled Lighting
11/30/14	AS	1.1	Updated for latest app	User instructions for Mobile Controlled Lighting

Table of Contents

VERSION HISTORY	II
TABLE OF CONTENTS	III
TABLE OF FIGURES.....	IV
1. <i>Introduction</i>	<i>I</i>
1.1 System Overview	1
1.2 System Requirements	1
2. <i>Installation Procedures</i>	<i>I</i>
3. <i>Operational Procedures</i>	<i>I</i>
3.1 Screen management	Error! Bookmark not defined.
3.2 Gateway Management.....	Error! Bookmark not defined.
3.3 Lighting Control.....	10
3.4 Access Control	1
3.5 Account Management	1
4. <i>Troubleshooting</i>	<i>I</i>
4.1 Frequently Asked questions	1
4.2 Error Codes and Messages	1
4.3 Note.....	Error! Bookmark not defined.

Table of Figures

Figure 1 Home Screen.....	2
Figure 2 Manage Switches- Turn on	Error! Bookmark not defined.
Figure 3 Mark a switch as favorite.....	Error! Bookmark not defined.
Figure 4 Turn off a switch	7
Figure 5 Turn on/off all switches at once	Error! Bookmark not defined.
Figure 6 Favorite switch screen	Error! Bookmark not defined.
Figure 7 Existing gateways	Error! Bookmark not defined.
Figure 8 Display gateway id.....	Error! Bookmark not defined.
Figure 9 Configure gateway.....	9
Figure 10 Add/update image of a gateway.....	13
Figure 11 choose options to pick image	Error! Bookmark not defined.
Figure 12 Add a new gateway	1
Figure 13 Add a new gateway	1
Figure 14 Dropdown with list of ids of existing gateways.....	2
Figure 15 Edit existing gateways	1
Figure 16 delete an existing gateway	Error! Bookmark not defined.
Figure 17 manage gateway switches	1
Figure 18 add a new switch.....	1
Figure 19 add a new switch dialog with hints	1
Figure 20 user fills add switch details.....	Error! Bookmark not defined.
Figure 21 delete switch.....	1
Figure 22 list of floors	1
Figure 23 add a new floor	Error! Bookmark not defined.
Figure 24 edit an existing floor	Error! Bookmark not defined.

Figure 25 delete floor..... Error! Bookmark not defined.

Figure 26 list of existing rooms..... Error! Bookmark not defined.

Figure 27 add a room..... Error! Bookmark not defined.

Figure 28 edit a room..... Error! Bookmark not defined.

Figure 29 delete a room Error! Bookmark not defined.

Figure 30 user settings screen..... Error! Bookmark not defined.

Figure 31 validate user password before locking..... Error! Bookmark not defined.

Figure 32 sign up..... Error! Bookmark not defined.

Figure 33 user fills sign up form Error! Bookmark not defined.

Figure 34 log in page Error! Bookmark not defined.

Figure 35 forgot password page..... Error! Bookmark not defined.

1. Introduction

This manual is designed to assist Mobile Controlled System app user to use the android app to control the switches remotely through the mobile.

- **System Overview**

Mobile-Controlled Lighting is a system which allows user to have control over electronic appliances/lights through mobile and tablets.

The primary purpose of the Mobile-Controlled Lighting is making buildings switch free. This system will help able users to control lights of their home and offices from mobile devices. User can turn on or off the switch, all switches of the room, and all switches on one click. User can group switches to room, floor. It will help to save electricity and also energy as we don't have to walk to switch to toggle it.

This manual is designed to assist Mobile Controlled Lighting app user to use the android app to control the switches remotely through the mobile.

- **System Requirements**

1.1 Hardware Requirements

Devices: Android Device, Advanchip Gateway.

1.2 Software Requirements

Operating System: Android with version above 4.1

1.3 Other Requirements

None

2. Installation Procedures

The system needs to be installed in client's android phone or tablet.

3. Operational Procedures

The system will interact with the lights using mobile and tablet applications for power on and off.

- User can group lights, turn all on all off
- User should be able to turn all the lights on and off at once
- The option to group switches in hierarchy into rooms, floors

• Screen management

In the home screen, the user can click on any button to choose either options at the home screen (as given in the figure 1) to perform following actions:

- Manage Gateway
 - User can add/edit/delete gateways
- Manage Users
 - User can add/edit/delete users
- Manage Switches
 - User can add/edit/delete switches
 - User can switch ON/OFF
 - User can mark switch as favorite
- Favorites
 - User can directly turn the favorite switch ON/OFF

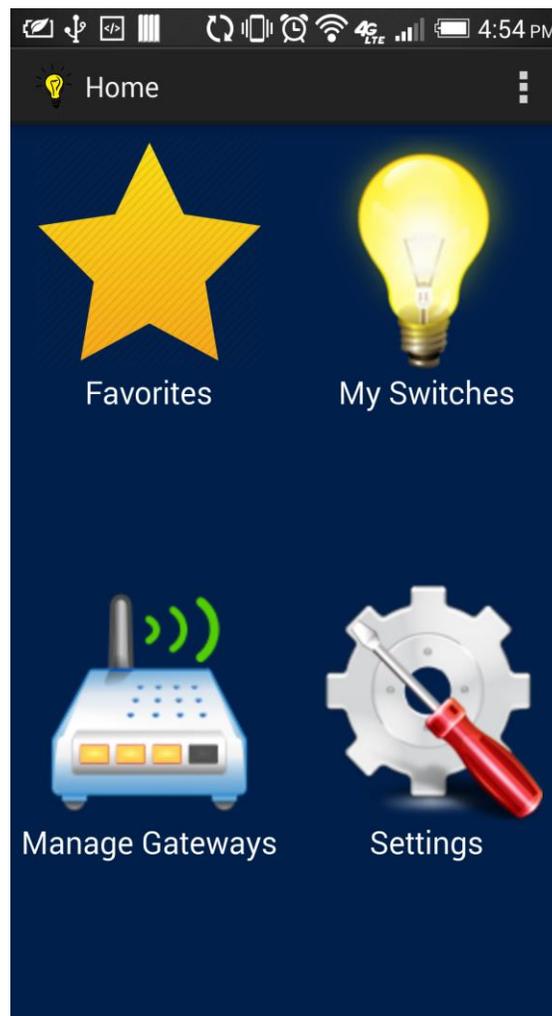


Figure 1: Home screen

3.1 Manage Switches

After the user clicks on the Manage switch button, Figure 2 screen opens.

- The user can mark a switch as Favorite by clicking on the star button which turns yellow when marked yes.
- The user can turn the Switch ON/OFF by clicking on the on/off button.

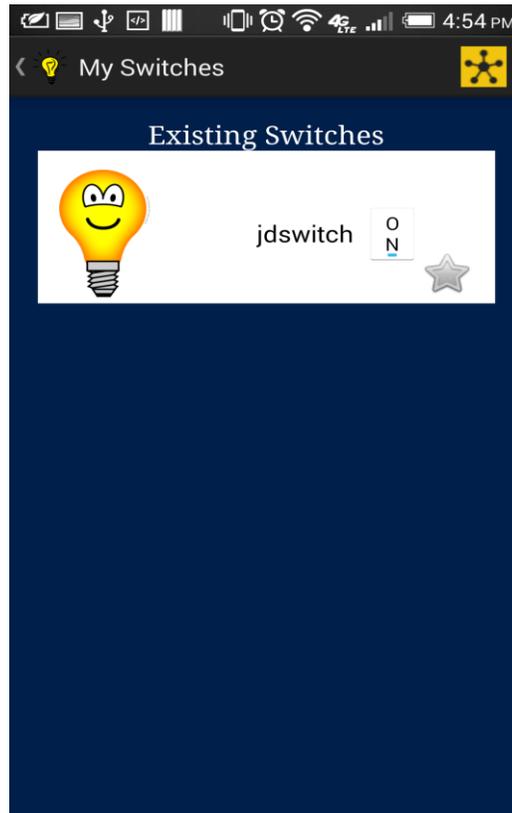


Figure 2: Manage switches – Turn ON

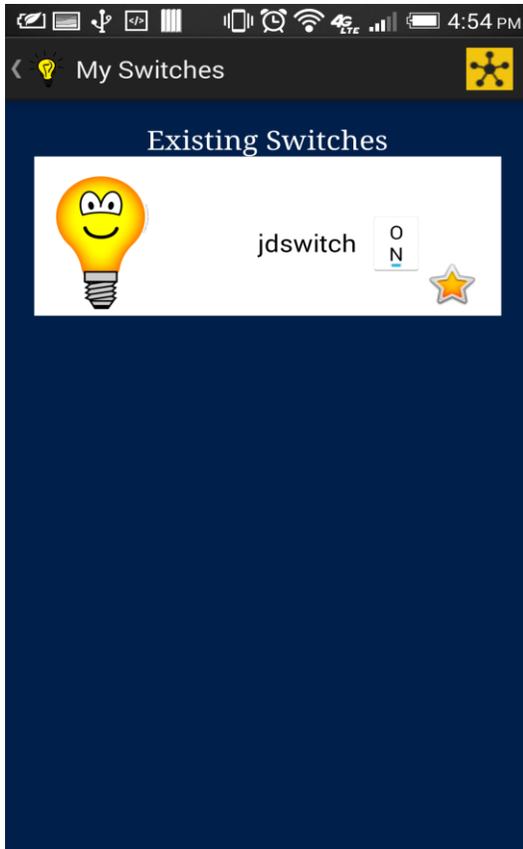


Figure 3 : Mark a switch as favorite

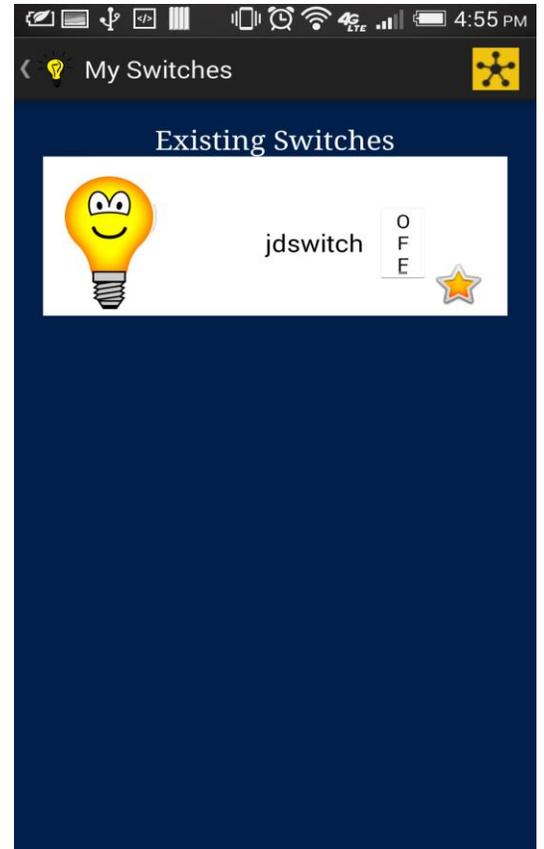


Figure 4 : turn off the switch

3.2 Manage all switches

In Users screen page, user can click the add button at top-right of the page to add a new user. User can choose to edit an existing user by clicking on an edit button for that particular user. Figure 3 is the manage user module:

- User can view the other existing users who have access to the gateway and its lights.
- User can edit an existing another user by clicking on the edit button
- User can delete an existing user by clicking on the delete button

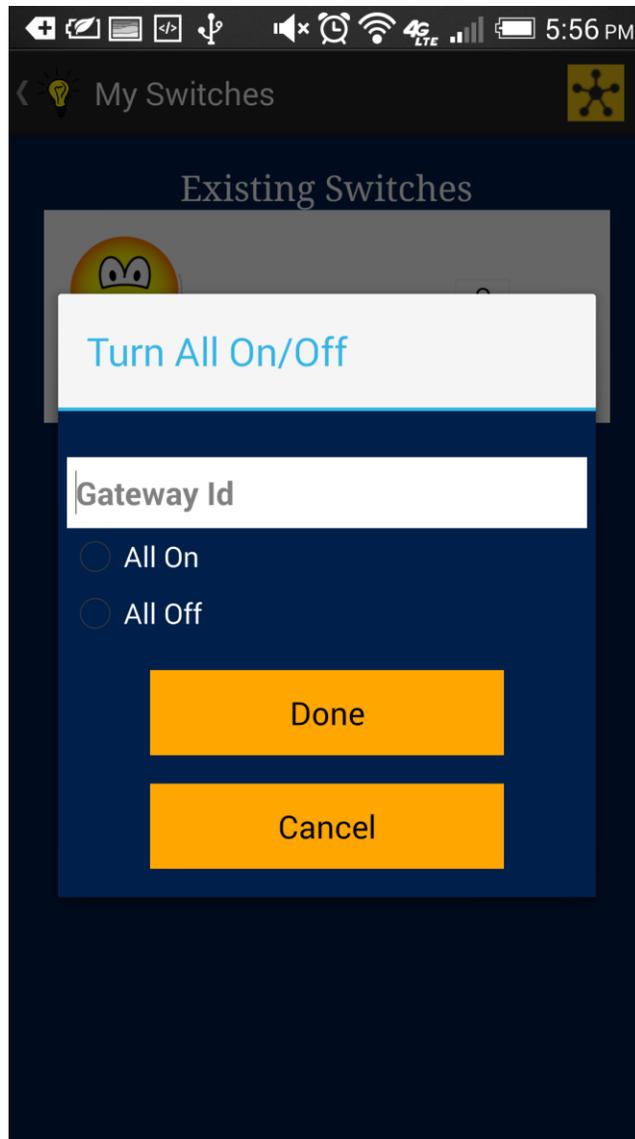


Figure 5 : Turn ON/OFF all the switches at once

3..3 Favorite switches

The user clicks on the favorite shortcut button on the home screen. It opens the Favorite screen. Figure 1 is the favorite screen page. Following are the actions that can be performed by the user :

- User can see the list of existing Favorite Switches with the status of the switches as they are either on or off.
- User can turn the Switch ON/OFF by clicking on the switch button.

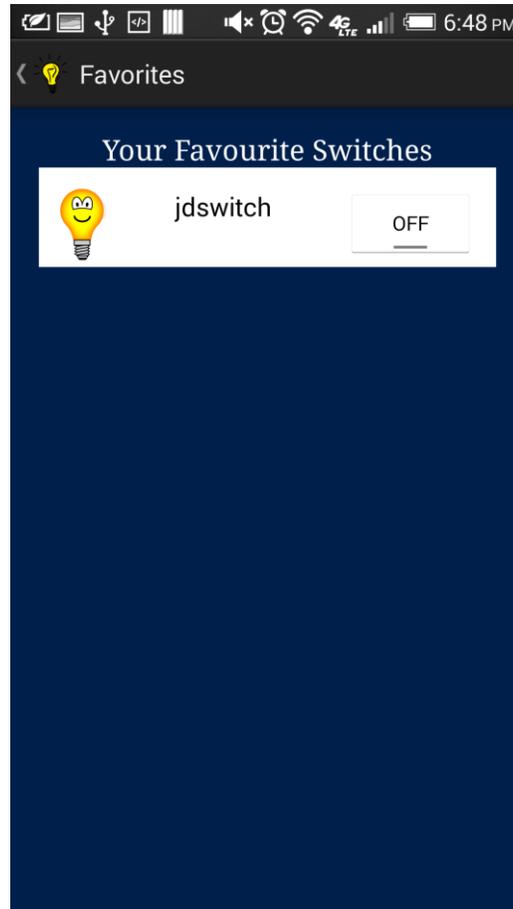


Figure 6: Favorite switches screen

- **Manage Gateway**

User reaches the Manage Gateway screen (Figure 1) by clicking on the ‘manage gateway’ button from the home screen.



Figure 7 : Existing gateways

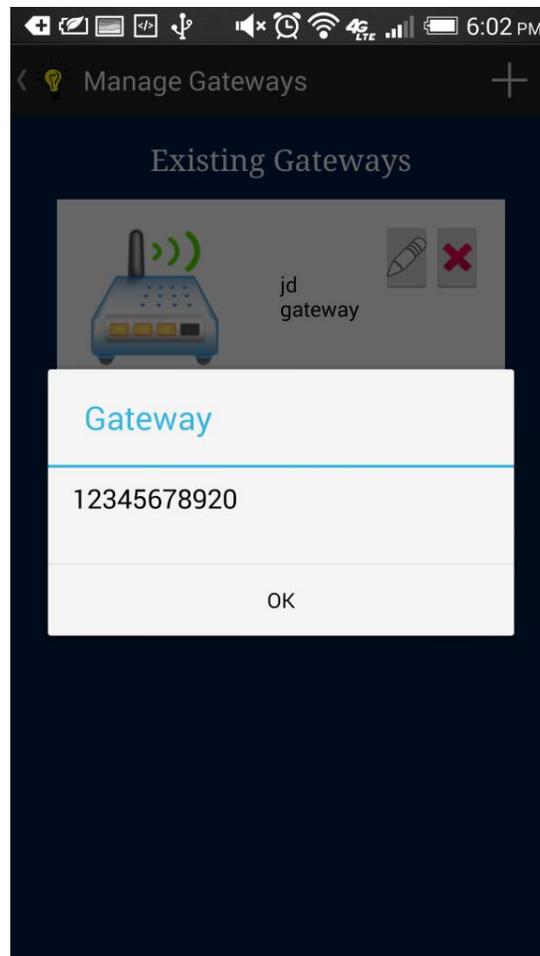
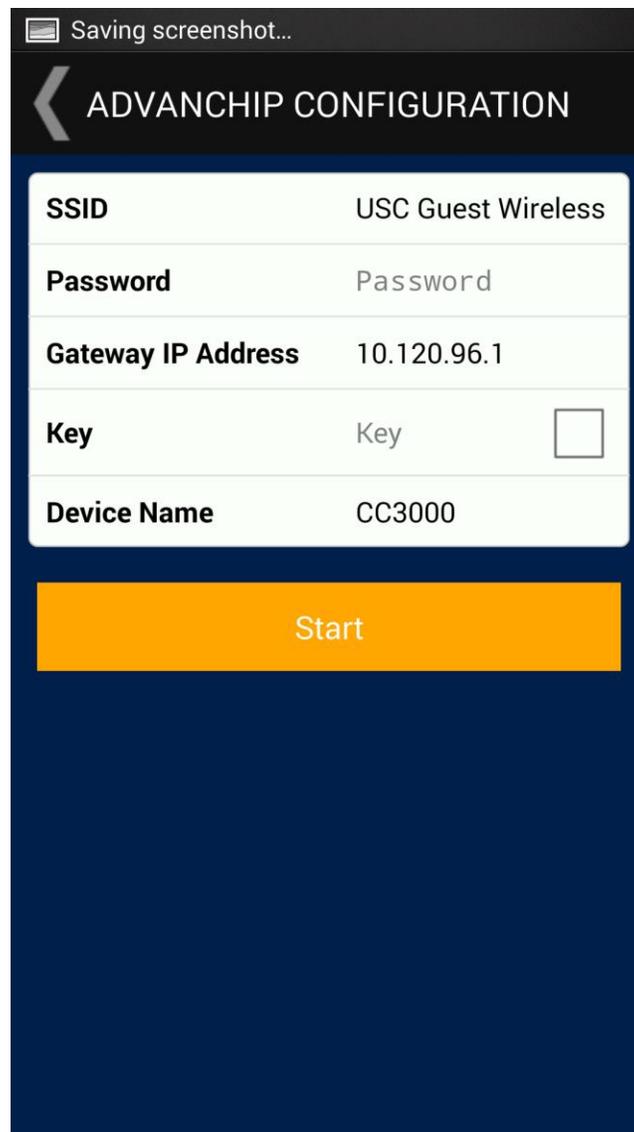


Figure 8 : When user clicks on the gateway , it displays the gateway id of that gateway.

3..1 Configure gateway

User can configure the gateway by clicking on the configure button on the top left of the manage gateway screen :



The screenshot shows a mobile application interface for configuring a gateway. At the top, there is a status bar that says "Saving screenshot...". Below that is a dark blue header with a back arrow and the text "ADVANCHIP CONFIGURATION". The main content area is a light green table with the following fields:

SSID	USC Guest Wireless
Password	Password
Gateway IP Address	10.120.96.1
Key	Key <input type="checkbox"/>
Device Name	CC3000

Below the table is a large orange button labeled "Start".

Figure 9 : Configure gateway

3..2 Edit image of a Gateway

- Figure 1 is the screen for editing the image of the gateway.
- The user can add/change the image of the gateway by “press and hold” on the image.
 - User picks the desired photo from phone gallery by clicking on the first option i.e. choose from gallery
 - OR
 - User takes a picture from phone camera by clicking on the second option.

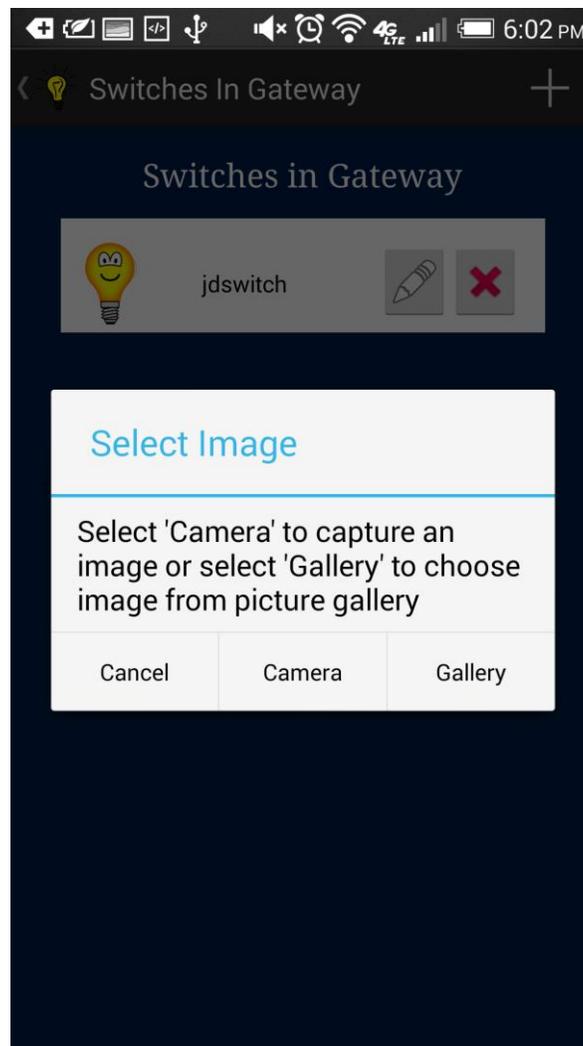


Figure 10 : Add/update image of a gateway

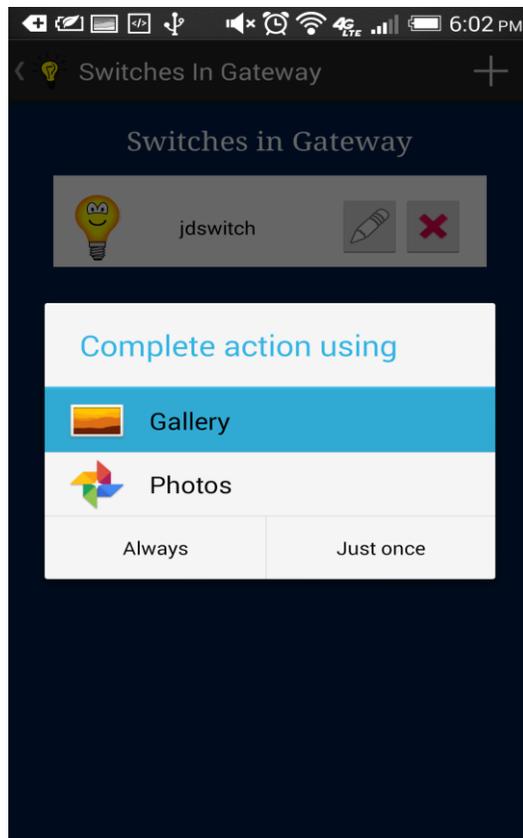


Figure 11: Choose option to pick image

3..3 Add Gateway

The user can click on the add button to add a new gateway. A dialog appears asking for the gateway id and name:

- User adds Gateway id which should be:
 - 16 digits <0-9>
 - Character < A- F>
- User assigns a Name to the Gateway

Figure 9 is the adding a gateway.

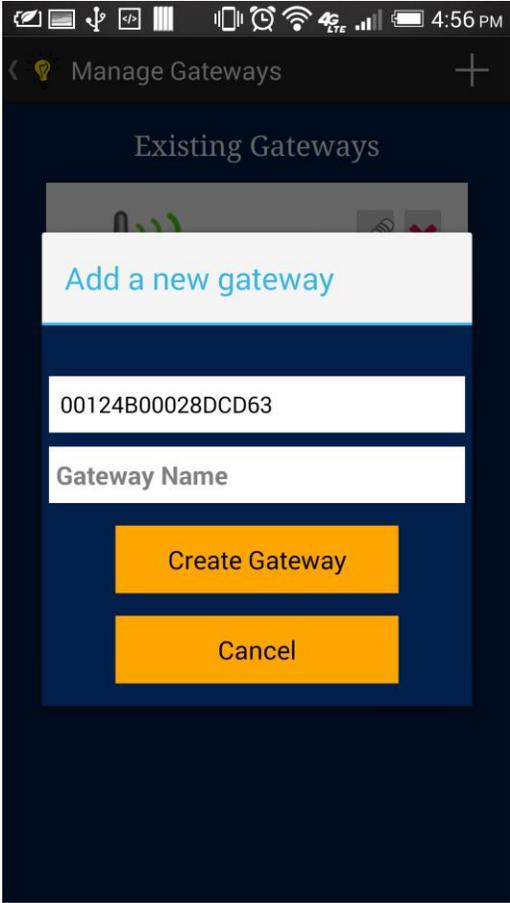


Figure 13: Add a new gateway

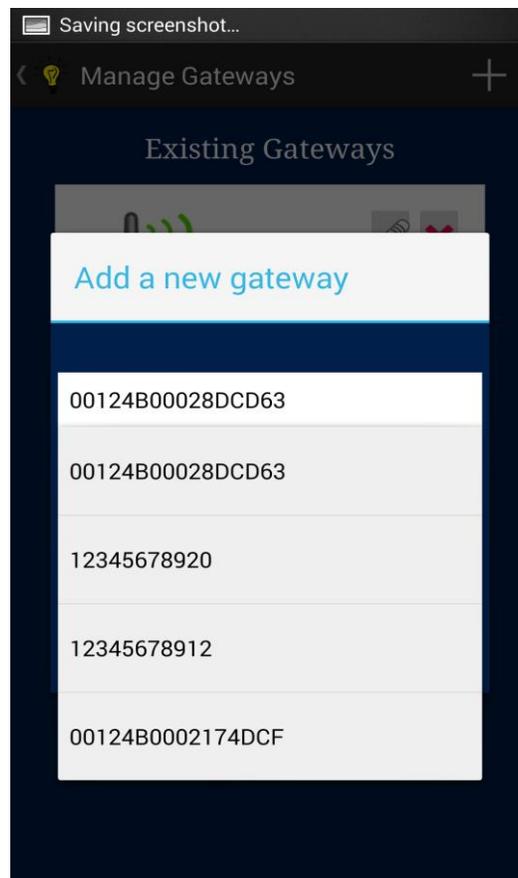


Figure 14 : Dropdown suggesting gateway ids of the existing gateways

3..4 Edit Gateway

- User assigns a new name to the gateway and then updates it.

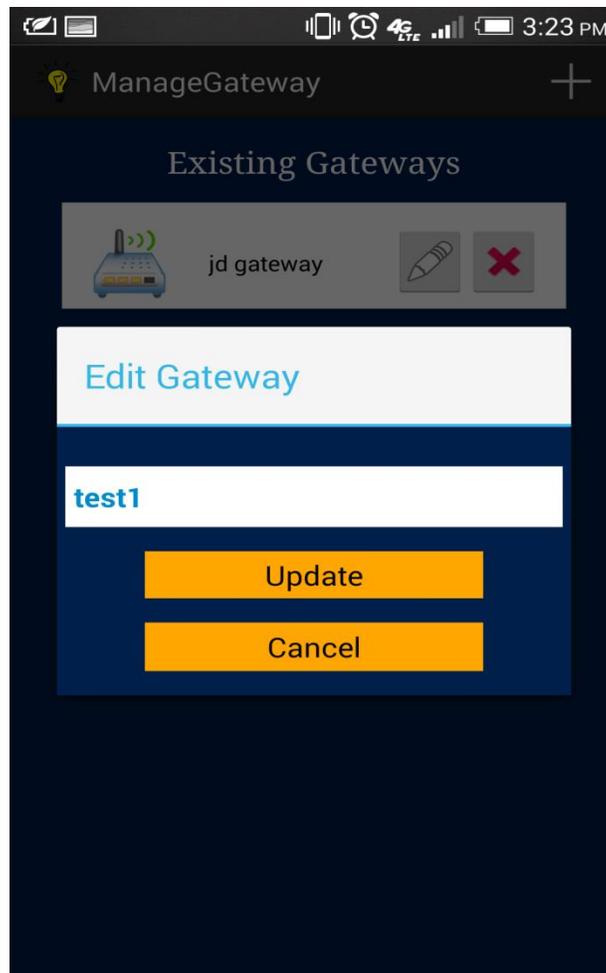


Figure 15: Edit existing gateway

3..5 Delete Gateway

- User deletes the specific gateway by clicking on delete button
- Then click yes for confirmation

Figure 9 is deleting a gateway.

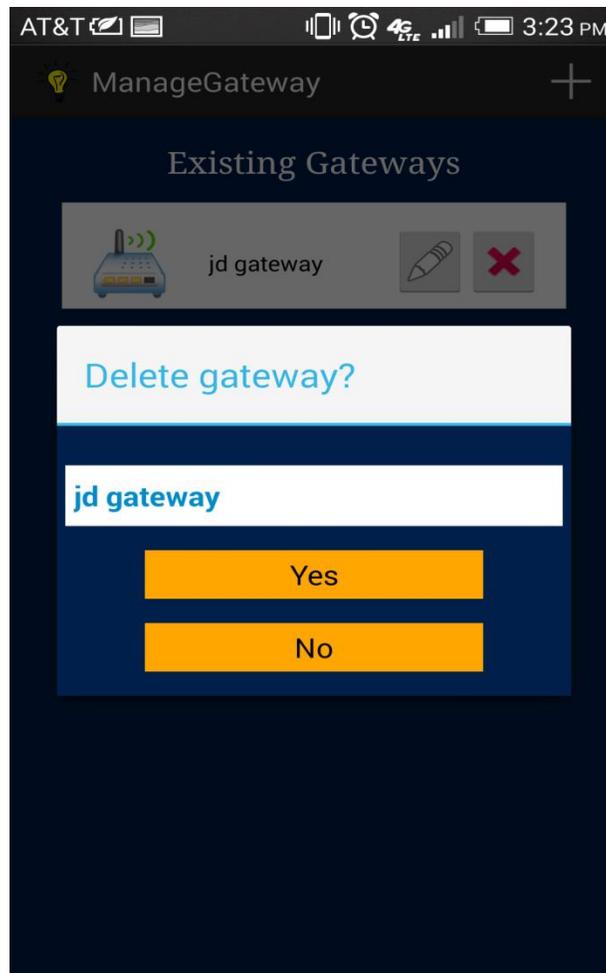


Figure 16: Delete an existing gateway

- **Manage gateway switch**

User sees 3 options to add a gateway switch.

- Manage switch
- Manage floor
- Manage room

3.1 Manage gateway options

- User can choose either of the options to add a switch
 - Hierarchy available:
 - Switch
 - Floor->Room->Switch
 - Room->Switch

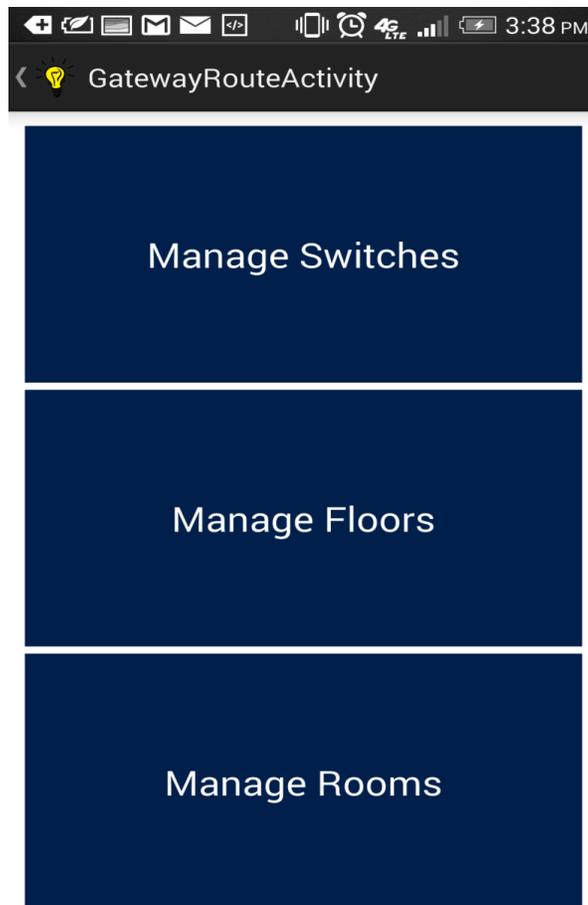


Figure 17 : Manage gateway switches

1. When user clicks on buttons - Manage Gateway -> Manage switches : User can add/edit/delete switch
2. When user clicks on buttons - Manage Gateway -> Add new Switch :
 - User enters the switch id
 - 16 digits <0-9>
 - Character <a-f>
 - User assigns the desired switch name



Figure 18 : Add new switch

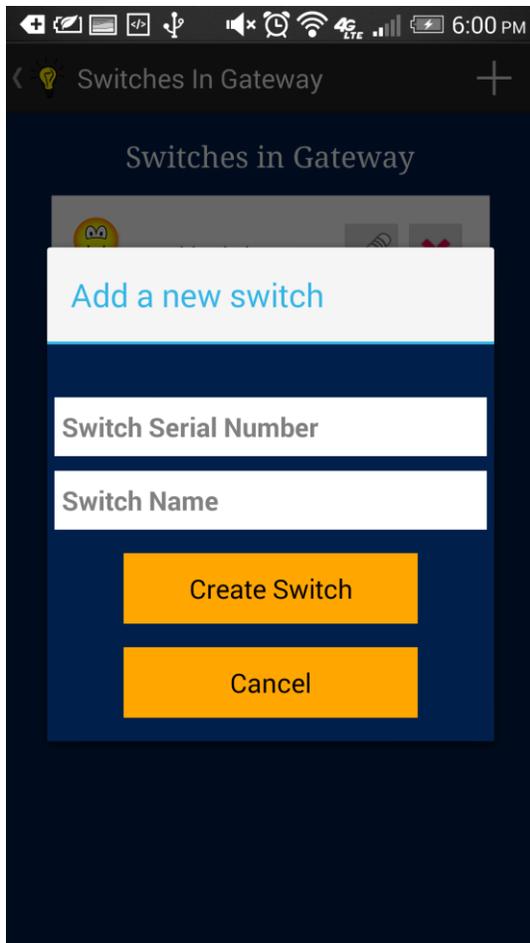


Figure 19 : User clicks on Manage Gateway -> Manage Switches

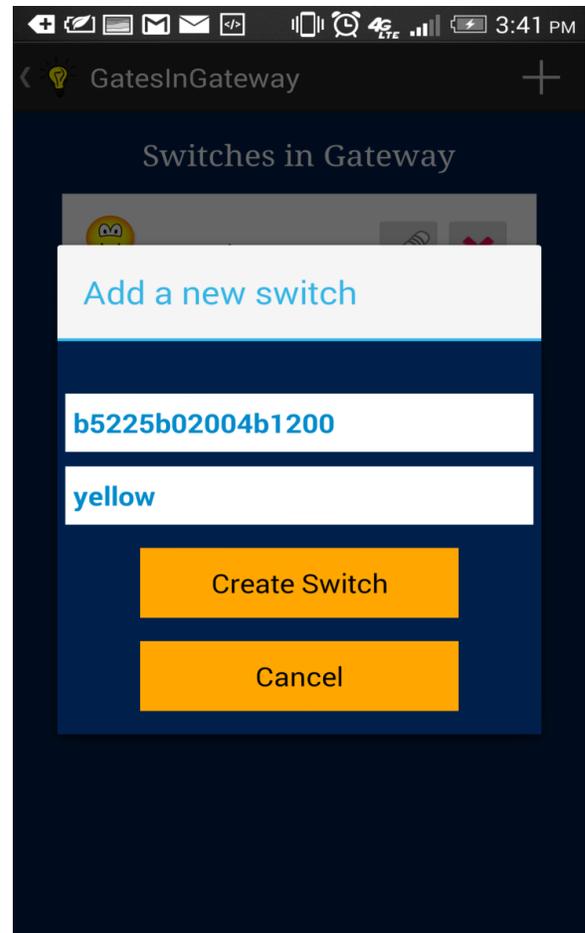


Figure 20: User fills info of New Switch

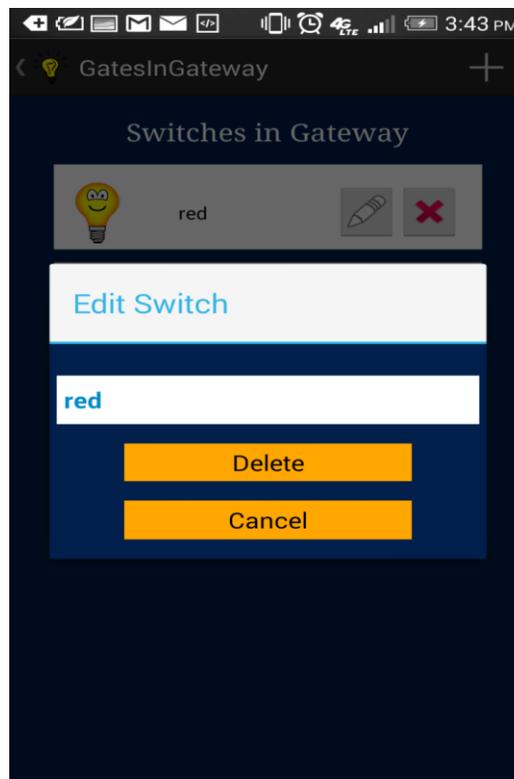


Figure 21 : Delete Switch

While deleting (figure 13) Users confirms by clicking on delete button to delete the switch.

3..2 Manage Floors

When the user clicks on the manage floors button on the manage gateway screen, he reaches the manage floors screen :

- The user can view the existing Floors.
- The user can add new Floor
- The user can edit/delete existing Floor

Figure 15 is managing the floors.

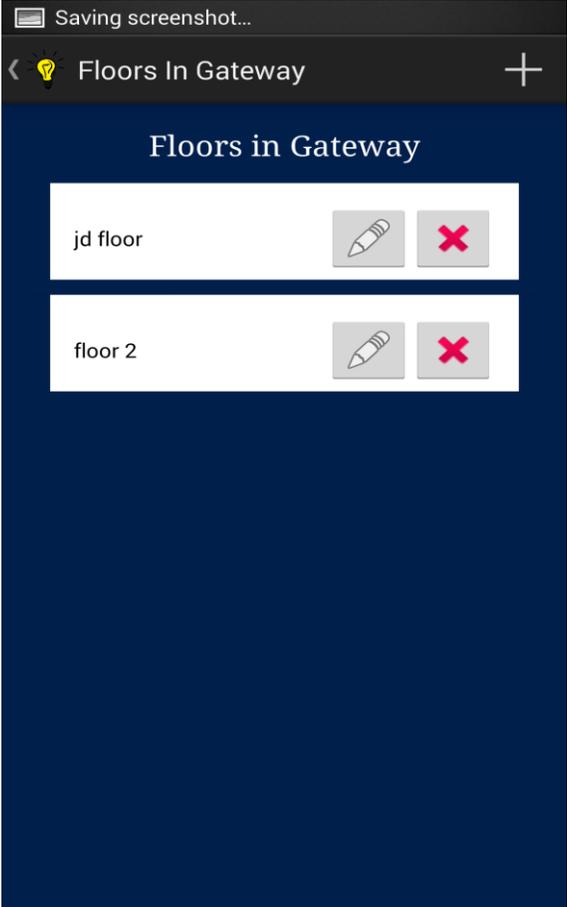


Figure 22 : List of floors

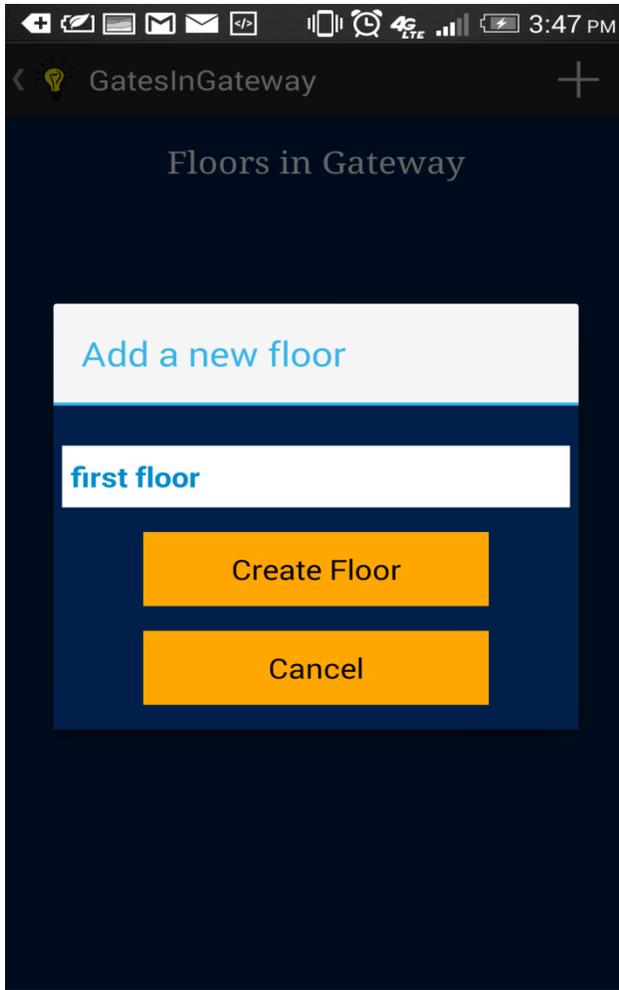


Figure 23 : Add a new Floor

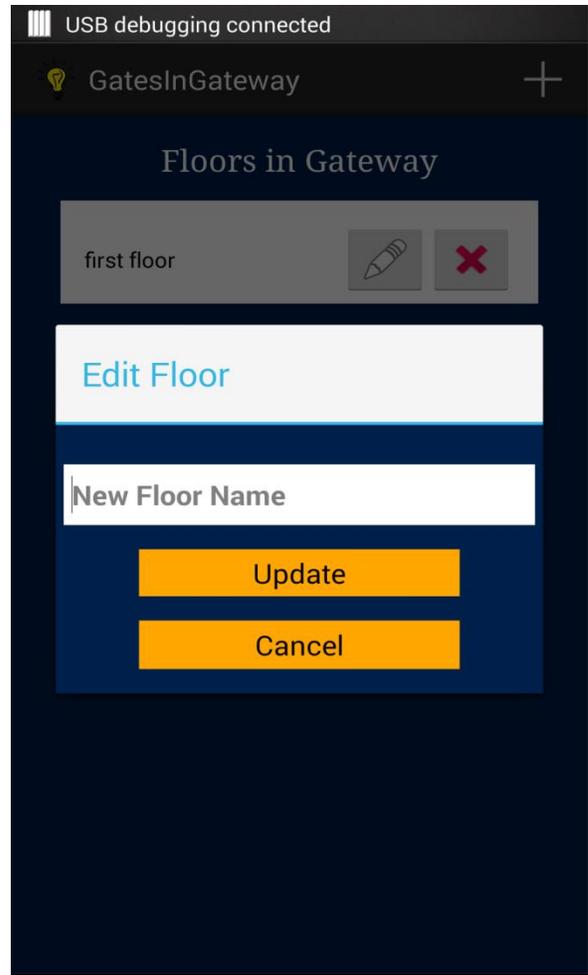


Figure 24 : Edit an existing Floor. User assigns the new Gateway name

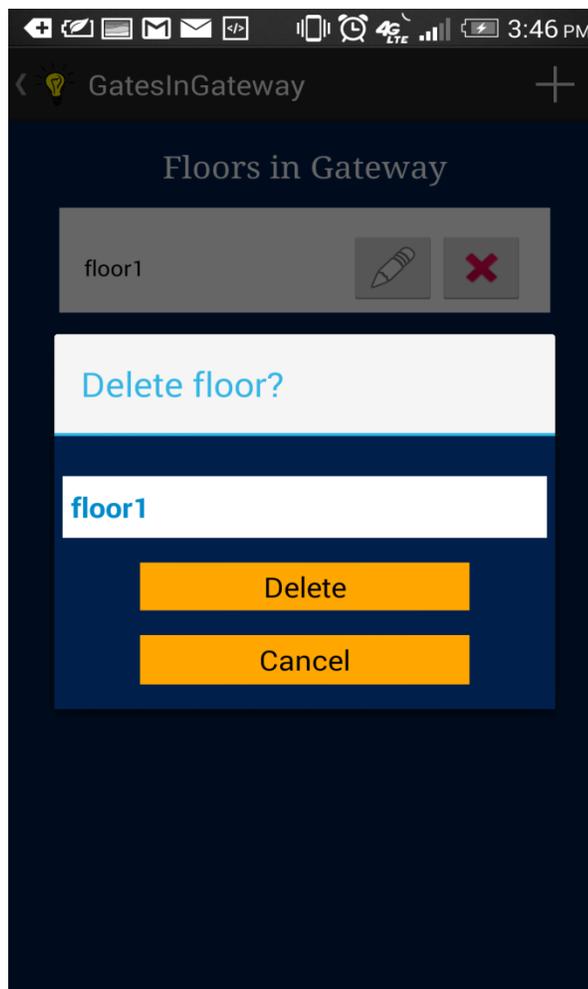


Figure 25 : User deletes the Floor

3..3 Manage Rooms

When the user clicks on the manage floors button on the manage gateway screen, he reaches the manage floors screen:

- The user can view the existing rooms.
- The user can add new Room
- The user can edit/delete existing room

Figure 15 is managing the rooms under a specific floor.

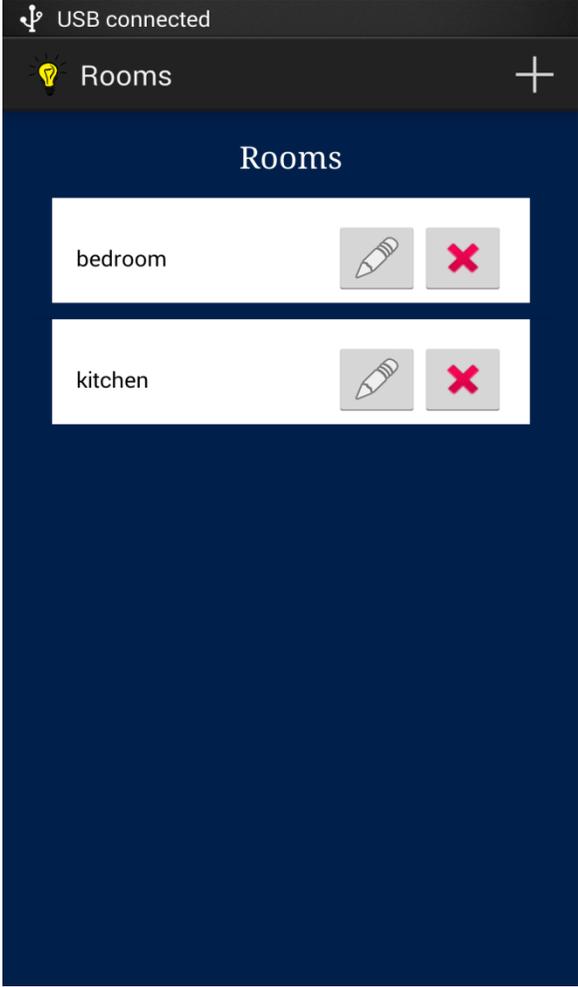


Figure 26 : List of existing Rooms

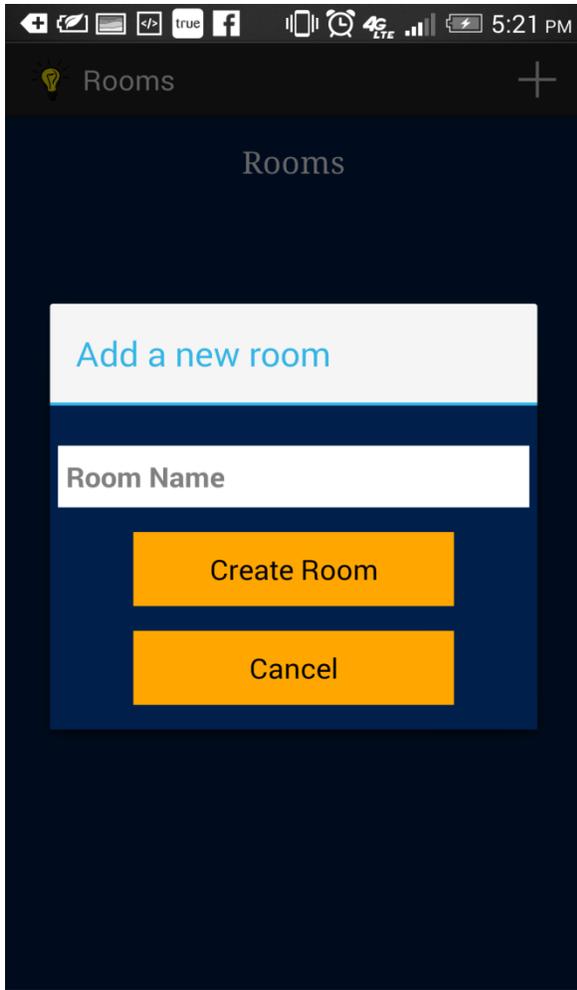


Figure 27: User can add a new room.

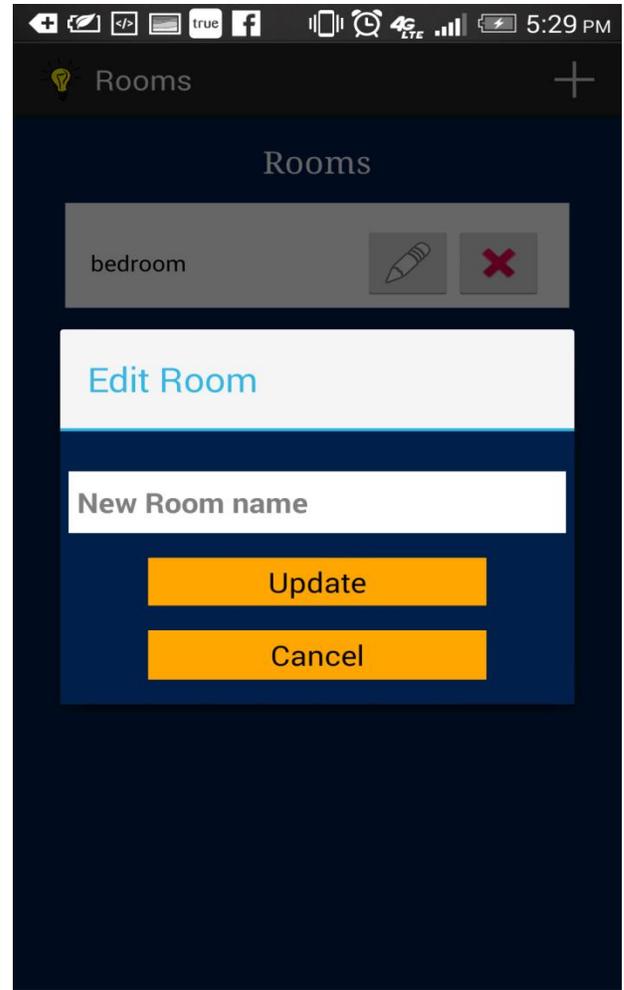


Figure 28: User assigns a new name to the Room

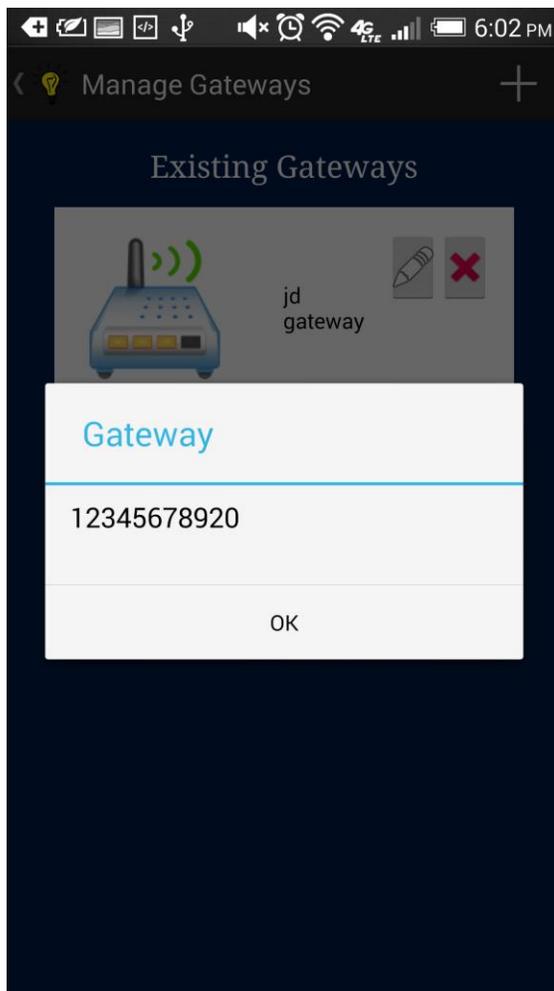


Figure 29 User deletes an existing room

- **Access control**

User reaches the user settings page when he clicks on the home shortcut button “Settings”.

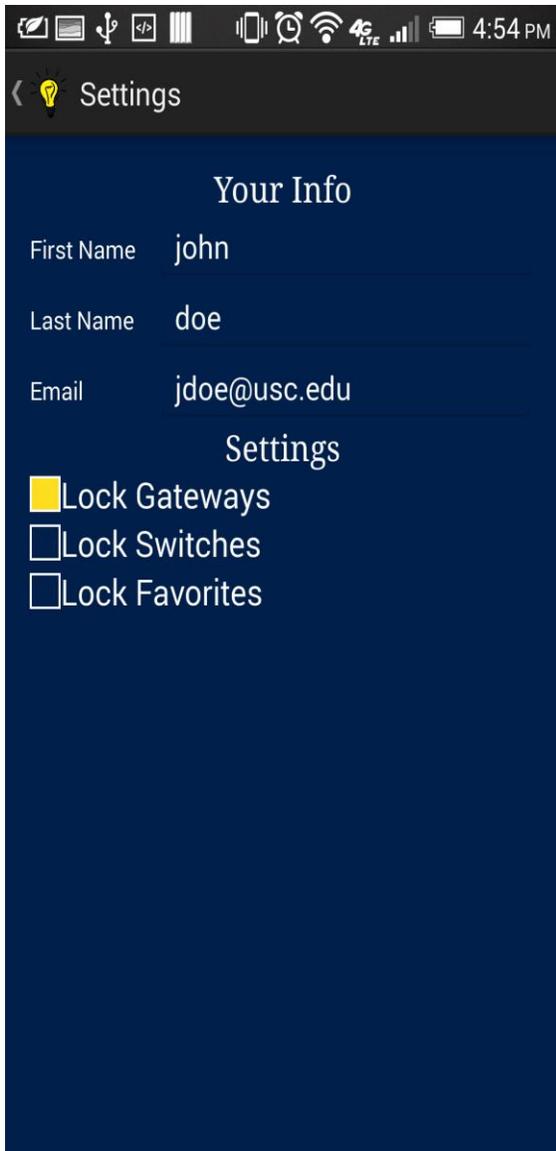


Figure 30 : Settings page to lock manage gateway screen option, lock manage gateway menu option

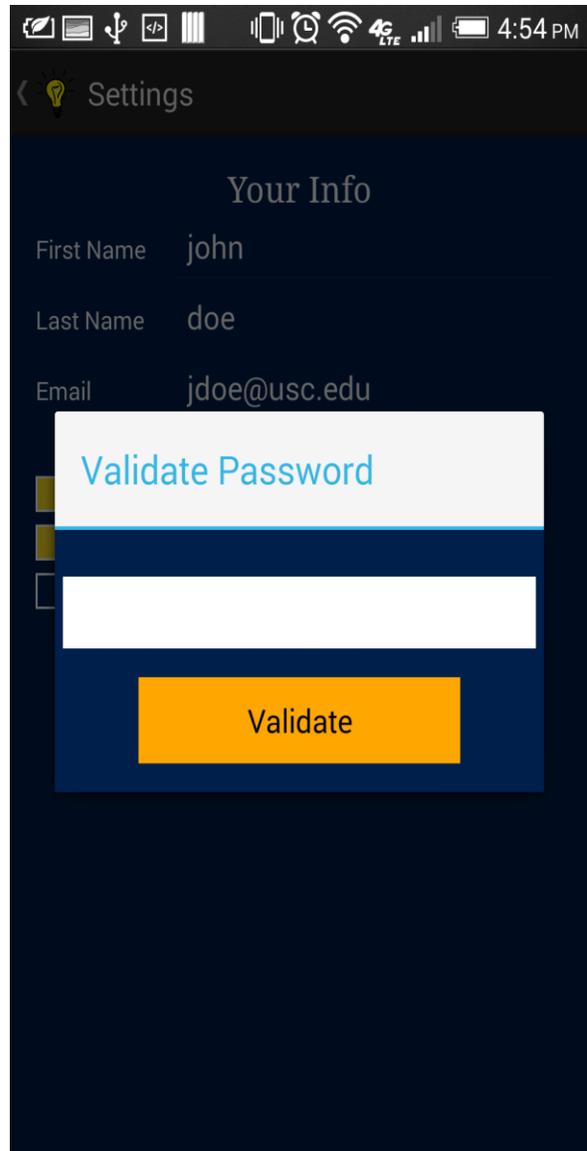


Figure 31: Validate password before locking

- **Account management**

User can log in to the app with the email id. The user becomes the admin of the gateway by default which he creates.

3.1 Login

User can log in to app by filling the email id and password on the login page.



Figure 32 : Sign up form for the app

If the user forgot the password, the user can click on the forgot password link. Then the screen asking the email id appears. The system sends a temporary password email to that the email id. The user uses the temporary password to reset the password by clicking on the reset password link from the log in page.

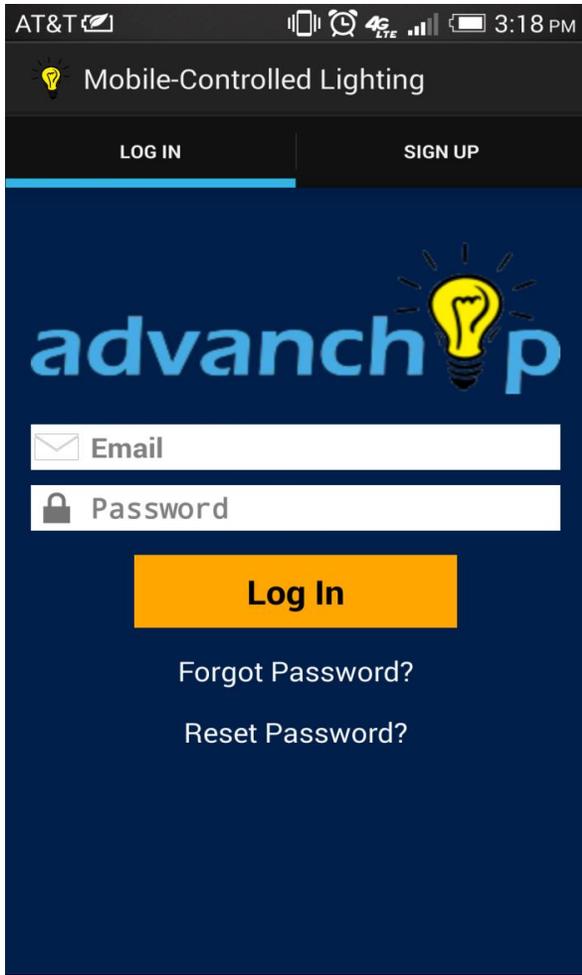


Figure 34 log in page

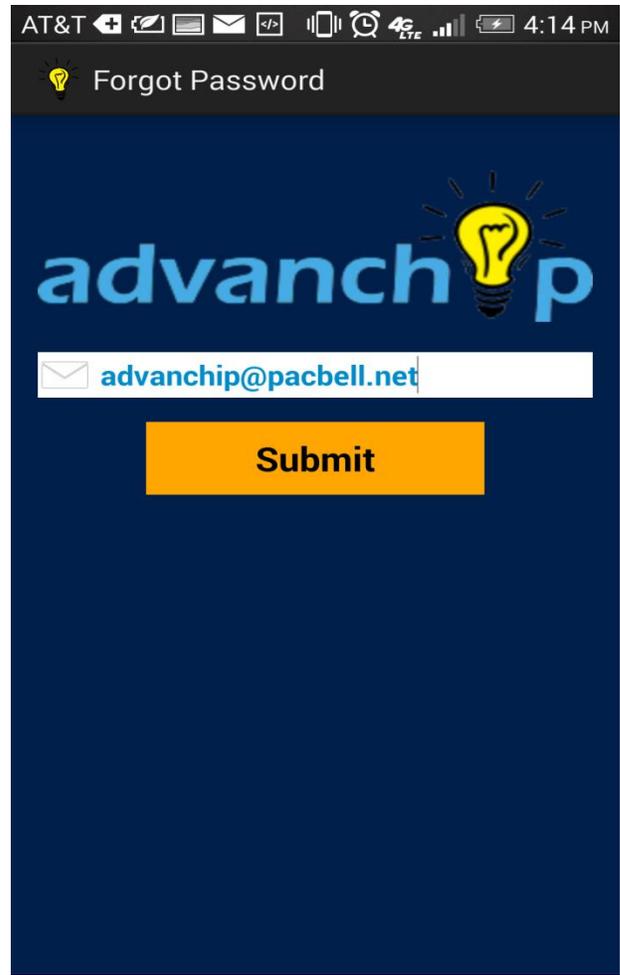


Figure 35 forgot password page

4. Troubleshooting

Try the following when controlling the switches from the mobile app:

- Make sure the switches are not broken.

- **Frequently Asked questions**

- How to install apk in the device?
 - First download the apk in the device.
 - Go to the downloaded location.
 - Click on the install button.
- How to connect to wifi?
 - Access the settings of the device.
 - Go to Wi-fi.
 - Search for your Wi-fi network.
 - Click on the network, enter the password of the Wi-fi and connect.

- **Error Codes and Messages**

Error code	Error Message
401	"Unauthorized"
409	"A user with that email address already exists"
422	"Missing parameters"
500	"Something went wrong. Please try again later"