COMSATS University Islamabad (CUI)

Software Requirement Specification
(SRS DOCUMENT)

for

Smart Construction Manager
Version 1.0

By

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Revision History

Name	Date	Reason for Changes	Version

Application Evaluation History

Comments (by committee) *include the ones given at scope time both in doc and presentation*	Action Taken
'Modules are clear and Well defined. Can Proceed for next step' – Dr Basit Raza	N/A
'Project idea is ok. All the modules are properly explained '– Mr. Zulfiqar Ali	N/A
'Add some major modules other than management systems' – Tehseen Riaz Abbasi	Modules Added
'Replace the "targeted project" with your project name in tables' caption.' – Mr. Tehseen Riaz Abbasi	"targeted project" replaced with project name in tables' caption.
'There is a difference between functionality and advantages, you have written too functionality of the system in advantages section, please correct it.' – Mr. Tehseen Riaz Abbasi	Functionality and advantages section updated
'The modules are not written with logical and technical flow, rather students tried to add modules without proper flow, understanding the system needs and boundaries.' – Mr. Tehseen Riaz Abbasi	Modules added with the flow
'Modules needs to refine, redefine, and improved.' – Mr. Tehseen Riaz Abbasi	Modules refined, redefined, and improved.
'Revise concept section. Explain it.' – Mr. Tehseen Riaz Abbasi	Concept section revised.
'Milestones for the Gantt chart needs revision, so revise your Gantt chart. Format is also not correct.' – Mr. Tehseen Riaz Abbasi	Gantt Chart revised
'Mockup images quality is not good, redesign them.' – Mr. Tehseen Riaz Abbasi	Mockup images quality improved and redesigned.

'The screenshot of plagiarism report is missing.' – Mr. Tehseen Riaz Abbasi	Plagiarism report added
'Limited tabular use case Add more tabular use cases.' – Mr. Tehseen Riaz Abbasi	Tabular use cases added.
'Revise the tabular use cases and FR in proper format with all required fields to be filled as guided w.r.t to updated modules. – Mr. Tehseen Riaz Abbasi	FR tables revised
'Revise and quantify the non-functional requirements properly. Add more NFR like scalability etc. – Mr. Tehseen Riaz Abbasi	More NFRs added
'Milestones for the Gantt chart needs revision, so revise your Gantt chart. Format is also not correct. – Mr. Tehseen Riaz Abbasi	Gantt chart revised

Supervised by

Dr. Ashfaq Hussain Farooqi

Signature_____

Table of Contents

1. Introduction

This is the SRS (Software Requirement Specification) document for our project Smart Construction Manager. The document briefly explains the working and description of the project. The document contains the Use Cases against specified modules. The Functional and Non-Functional requirements are also elicited in the document. The UML diagrams and Class diagrams explain the flow of the application. Moreover, user interfaces describe the working of application for the end user.

1.1 Purpose

Smart Construction Manager is a One Window Solution for the construction process of housing in the state. Keeping in view the incumbent government's housing and construction policies & packages to minimize the time & effort for the construction process and ensure transparency. This solution also addresses unexpected turn of events in the fiscal policies caused by the global pandemic (COVID-19). It also ensures the safety of people regarding the SOPs. Smart Construction Manager is an all-rounder application addressing basic house construction needs.

1.2 Scope and Modules

System will provide a one window application and act as agent of communication between construction companies, user, and government bodies. The user will provide the required information to the system the system will authenticate the user. User will submit request to respective organization (depending upon the location of project) & The construction company. The authorities and the industries will accept the request. Design and Layout will be sent by user. After review authorities and industries will generate the response.

1.2.1 Modules

First module buys and sell, user can buy land and other construction equipment posted by other users for sale. **Second module** deals with user searching and provides functionality to search by talking. **Third module** is user chatting with other users. **Fourth module** shows user recommendations on home page. **Fifth module** helps user decide the map for construction site. And **sixth module** will be for designing and decorating house with AR. **Seventh module** deals with the user sending application requests to government bodies for various procedures. **Eight module** provides admin portal to government bodies to manage user requests.

2. Overall Description

The government organizations such as the development authorities of different cities have introduced the concepts of One-window operations to streamline the working process, our project is providing faster and easier access to this operation.

2.1 Product Perspective

Smart Construction Manager is designed to ease the entire process of construction. The product is an alternate to growing market of construction site. Mostly websites like Zameen.com and Graana.com offer the buy and sell functionality. Smart Construction Manager will help user to communicate with government bodies too.
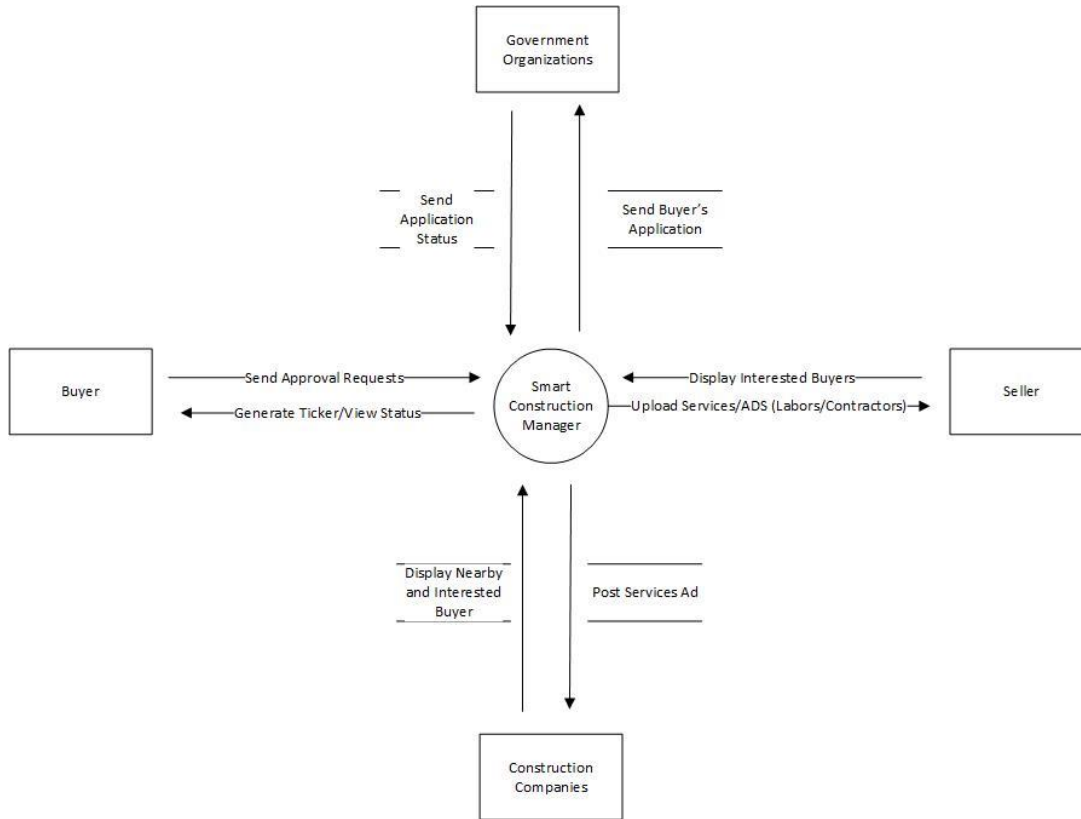
Figure 1: Context Diagram of Targeted Project

2.2 Operating Environment

OE-1: *The System shall operate correctly with the following web browsers: Firefox versions 80 through own wards; Google Chrome (all versions); and Apple Safari versions 10.0 and above.*

OE-2: *The Minimum Smart Phone OS requirement is 6.0 for Android and IOS 9 for iPhones.*

OE-3: *The Application will be available for Residence of Islamabad, Pakistan. In future, we will be upscaling to be used country wide.*

3. Design and Implementation Constraints

CO-1: The system shall use the current corporate standard MongoDB database engine
CO-2: The system shall use ExpressJS as Web Backend and ReactJS as Web Frontend Framework
CO-3: The system shall use React Native for Smart Phone Development (Android and IOS).

4. Requirement Identifying Technique

The requirements for the project will be gathered using Interviews and online Google Forms.

4.1   Use Case Diagram
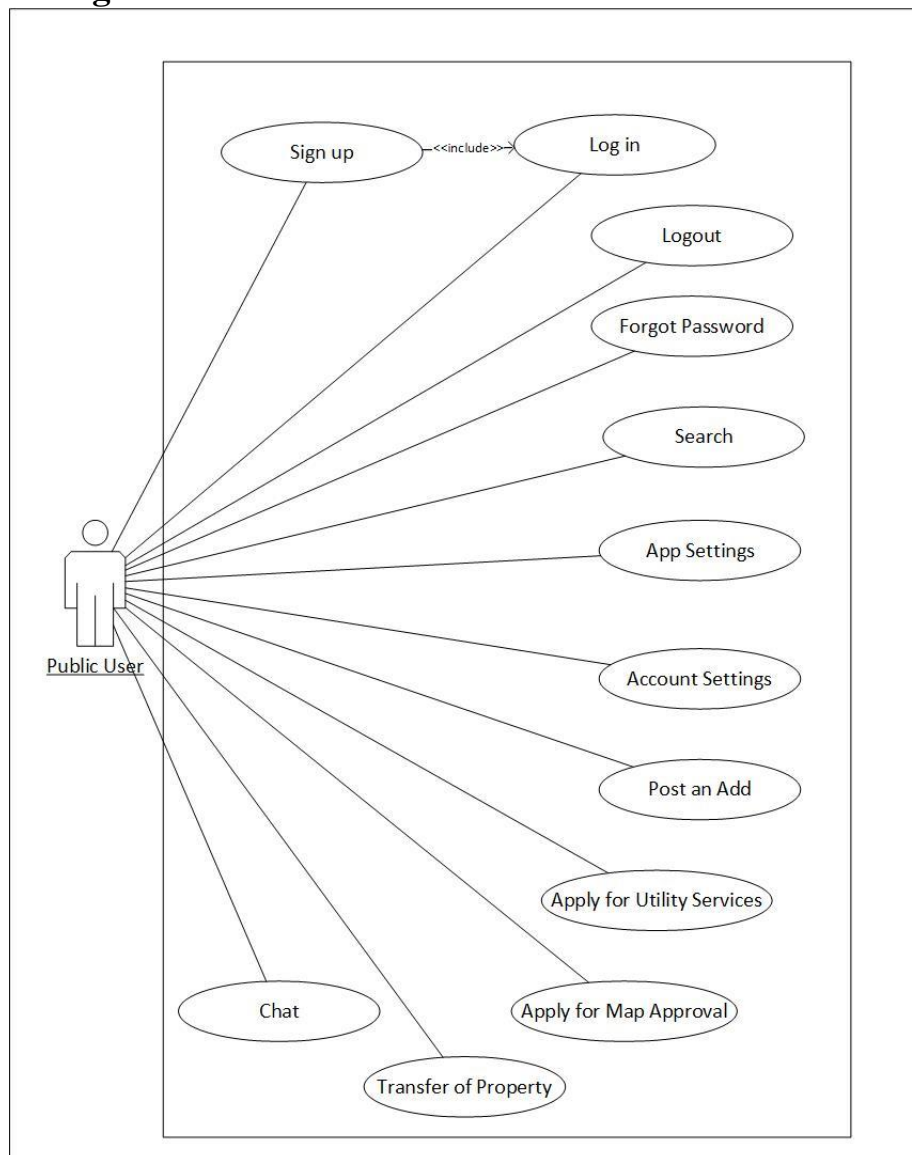
Figure 1: Use Case Diagram Showing Actions of User from Home Screen
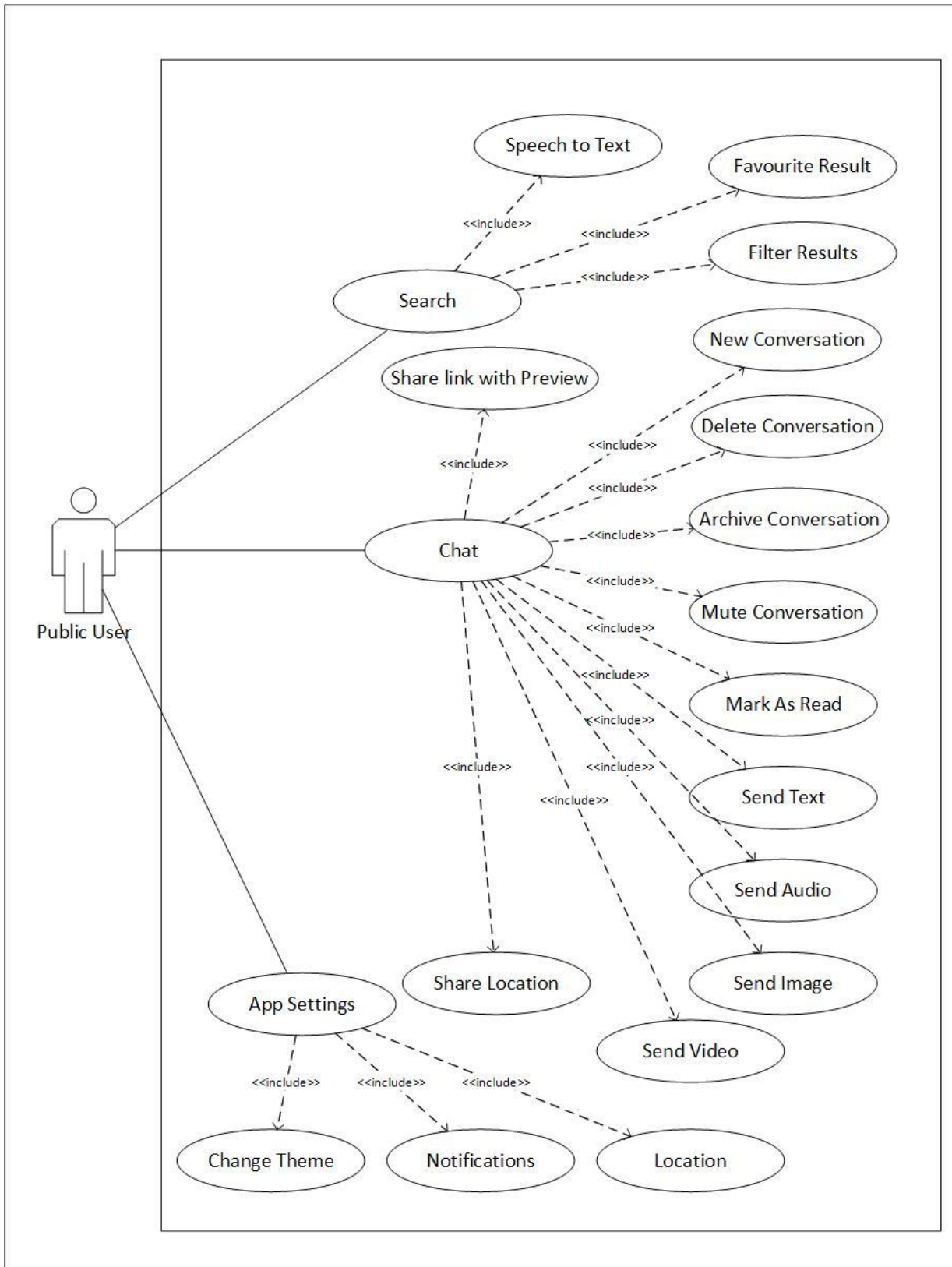
Figure 2: User Interface with Basic App Features

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Figure 3: Use Case Diagram Explaining Activities of User

Figure 4: Use Case Diagram Showing Application Procedure with Official Authorities

Figure 5: Use Case Diagram Explaining Activities of Admin

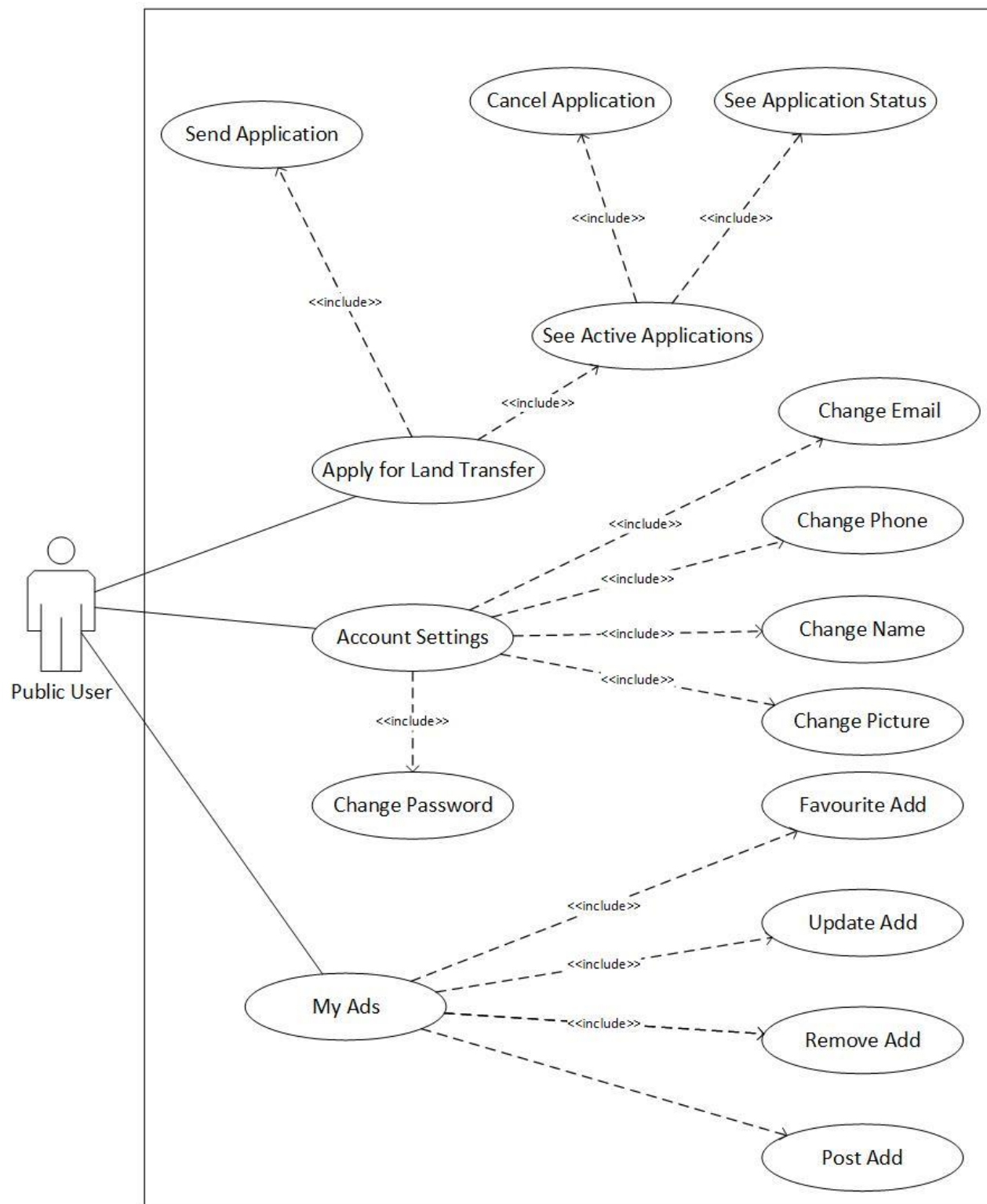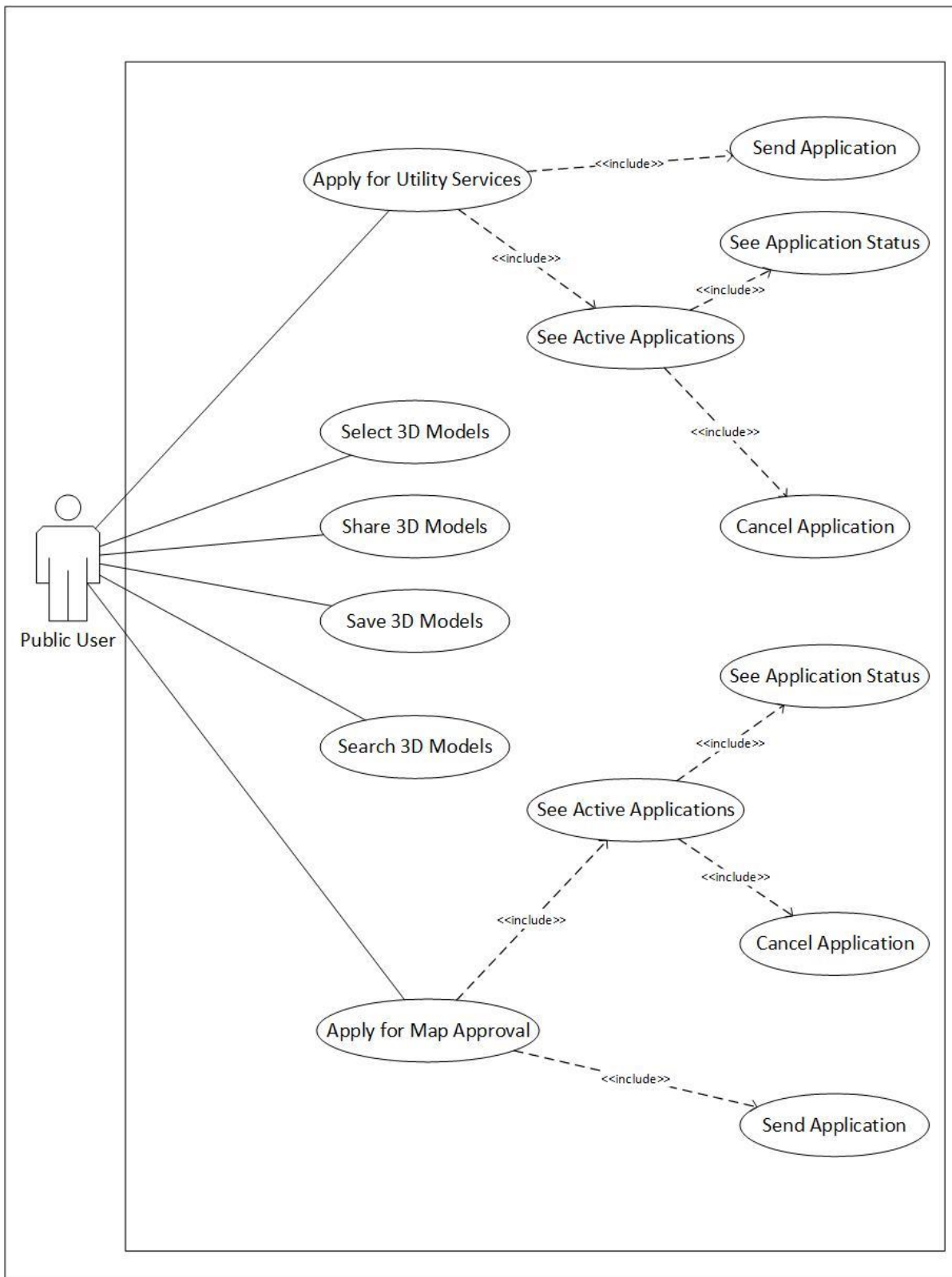## 4.2   Use Case Description

Module 1: Basics

M1-UC1	Sign up (Mobile)
M1-UC2	Sign up (Web)
M1-UC3	Log in (Mobile)
M1-UC4	Log in (Web)
M1-UC5	Forget Password (Mobile)
M1-UC6	Forget Password (Web)
M1-UC7	Update Profile (Mobile)
M1-UC8	Update Profile (Web)
M1-UC9	Profile Privacy (Web)
M1-UC10	Profile Privacy (Mobile)
M1-UC11	Help & Support
M1-UC12	Remove Account (Mobile)
M1-UC13	Remove Account (Web)
M1-UC14	App Settings (Mobile)
M1-UC15	App Settings (Web)
M1-UC16	Notifications (Web)
M1-UC17	Notifications (Mobile)
M1-UC18	Subscriptions

Module 2: Buy and Sell

M2-UC1	Post Add (Web)
M2-UC2	Post Add (Mobile)
M2-UC3	Edit Add (Web)
M2-UC4	Edit Add (Mobile)
M2-UC5	Delete Add (Web)
M2-UC6	Delete Add (Mobile)
M2-UC7	View Add (Web)
M2-UC8	View Add (Mobile)
M2-UC9	History (Web)
M2-UC10	History (Mobile)
M2-UC11	Favorite Add (Web)
M2-UC12	Favorite Add (Mobile)

Module 3: Search

M3-UC1	Search by Text (Web)
M3-UC2	Search by Text (Mobile)
M3-UC3	Search by Audio (Web)
M3-UC4	Search by Audio (Mobile)
M3-UC5	Filters (Web)
M3-UC6	Filters (Mobile)
M3-UC7	Suggestions (Web)
M3-UC8	Suggestions (Mobile)

Module 4: Chat

M4-UC1	New Conversation (Web)
M4-UC2	New Conversation (Mobile)
M4-UC3	Delete Conversation (Web)
M4-UC4	Delete Conversation (Mobile)
M4-UC5	Archive Conversation (Web)
M4-UC6	Archive Conversation (Mobile)
M4-UC7	See Archived Conversation (Web)
M4-UC8	See Archived Conversation (Mobile)
M4-UC9	Send Text (Web)
M4-UC10	Send Text (Mobile)
M4-UC11	Send File (Web)
M4-UC12	Send File (Mobile)
M4-UC13	Send Location (Mobile)
M4-UC14	Send Location (Web)
M4-UC15	Send a Link (Web)
M4-UC16	Send a Link (Mobile)
M4-UC17	Delete Message (Web)
M4-UC18	Delete Message (Mobile)
M4-UC19	Delete for All (Web)
M4-UC20	Delete for All (Mobile)

Module 5: Recommendations Tab

M5-UC1	Process Recommendation (Web)
M5-UC2	Process Recommendation (Mobile)
M5-UC3	Show Recommendation (Web)
M5-UC4	Show Recommendation (Mobile)
M5-UC5	Take Feedback (Web)
M5-UC6	Take Feedback (Mobile)

Module 6: Map Making (3D Modeling)

M6-UC1	Pre-Built Models
M6-UC2	Show Model (Web)
M6-UC3	Show Model (Mobile)
M6-UC4	Save Model (Web)
M6-UC5	Save Model (Mobile)
M6-UC6	Share Model (Web)
M6-UC7	Share Model (Mobile)

Module 7: House Décor (AR)

M7-UC1	Show Objects
M7-UC2	Select Objects
M7-UC3	Move Objects
M7-UC4	Resize Objects
M7-UC5	Place Objects
M7-UC6	Rotate Objects
M7-UC7	Remove Objects

Module 8: Application Request

M8-UC1	New Application (Web)
M8-UC2	New Application (Mobile)
M8-UC3	Verify Application (Web)
M8-UC4	Verify Application (Mobile)
M8-UC5	Manage Application (Web)
M8-UC6	Manage Application (Mobile)
M8-UC7	View Application (Web)
M8-UC8	View Application (Mobile)
M8-UC9	Cancel Application (Web)
M8-UC10	Cancel Application (Mobile)
M8-UC11	Receive Update (Web)
M8-UC12	Receive Update (Mobile)
M8-UC13	Re-submit (Web)
M8-UC14	Re-submit (Mobile)

Module 9: Requests Management

M9-UC1	Create Admin Account
M9-UC2	First Login
M9-UC3	Login
M9-UC4	Forget Password
M9-UC5	Update Profile
M9-UC6	Add Employee
M9-UC7	Employee role
M9-UC8	Remove Employee
M9-UC9	View Request
M9-UC10	Download/View Attachments
M9-UC11	Update Request
M9-UC12	Terminate Request

4.2.1 Module 1: Basics

Following are Tabular Use Cases for Module 1

Table 1: Sign up (Mobile).

Use Case ID:	M1-UC1
Use Case Name:	Sign up (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to create account for SCM.
Trigger:	Click on the "Sign up" button
Level:	High
Preconditions:	PRE-1. User has Valid Email.
Includes:	N/A
Normal Flow:	1. User will click on Sign up Button 2. User will enter email 3. User will enter password 4. User will confirm password 5. User's Email will be verified via OTP 6. User will enter OTP received on email 7. User will add profile information 8. User will click continue to save data
Alternative Flows:	N/A
Exceptions:	1. If email is invalid user will see a prompt message "Enter Valid Email" 2. If password does not meet minimum requirements "Password must have minimum 8 characters, digits, alphabet and special character" 3. User enters invalid OTP "Prompt Message saying Enter Valid OTP"
Postconditions:	POST-1. User will be registered
Business Rules	N/A
Assumptions:	User has an email and can speak English

Table 2: Sign up (Web).

Use Case ID:	M1-UC2
Use Case Name:	Sign up (Web)
Actors:	Primary Actor: User
Description:	User will be able to create account for SCM.
Trigger:	Click on the "Sign up" button
Level:	High
Preconditions:	PRE-1. User has Valid Email.
Includes:	N/A
Normal Flow:	1. User will click on Sign up Button 2. User will enter email 3. User will enter password 4. User will confirm password 5. User's Email will be verified via OTP 6. User will enter OTP received on email 7. User will add profile information 8. User will click continue to save data
Alternative Flows:	N/A
Exceptions:	1. If email is invalid user will see a prompt message "Enter Valid Email" 2. If password does not meet minimum requirements "Password must have minimum 8 characters, digits, alphabet and special character" 3. User enters invalid OTP "Prompt Message saying Enter Valid OTP"
Postconditions:	POST-1. User will be registered
Business Rules	N/A
Assumptions:	User has an email and can speak English

Table 3: Log in (Mobile).

Use Case ID:	M1-UC3
Use Case Name:	Log in (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to login into SCM account.
Trigger:	Click on the "Log in" button
Level:	High
Preconditions:	PRE-1. User has Created Account.
Includes:	M1-UC1
Normal Flow:	1. User will click on Log in Button 2. User will enter email 3. User will enter password 4. User will click Login to continue
Alternative Flows:	N/A
Exceptions:	1. If email is invalid user will see a prompt message "Enter Valid Email" 2. If password does not meet minimum requirements "Password must have minimum 8 characters, digits, alphabet and special character" 3. User email and password does not match the records "Invalid Email or Password' will prompt.
Postconditions:	POST-1. User will be Logged in.
Business Rules	N/A
Assumptions:	User has an email and can speak English

Table 4: Log in (Web).

Use Case ID:	M1-UC4
Use Case Name:	Log in (Web)
Actors:	Primary Actor: User
Description:	User will be able to login into SCM account.
Trigger:	Click on the "Log in" button
Level:	High
Preconditions:	PRE-1. User has Created Account.
Includes:	M1-UC2
Normal Flow:	1. User will click on Log in Button 2. User will enter email 3. User will enter password 4. User will click Login to continue
Alternative Flows:	N/A
Exceptions:	4. If email is invalid user will see a prompt message "Enter Valid Email" 5. If password does not meet minimum requirements "Password must have minimum 8 characters, digits, alphabet and special character" 6. User email and password does not match the records "Invalid Email or Password' will prompt.
Postconditions:	POST-1. User will be Logged in.
Business Rules	N/A
Assumptions:	User has an email and can speak English

Table 5: Forget Password (Mobile).

Use Case ID:	M1-UC5
Use Case Name:	Forget Password (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to login into SCM account after setting new password.
Trigger:	Click on the "Forget Password" button
Level:	High
Preconditions:	PRE-1. User has Created Account.
Includes:	M1-UC1
Normal Flow:	1. User will click on 'Forget Password' Button 2. User will enter email 3. OTP will be sent to User's email 4. User will OTP 5. User will enter new password 6. User will confirm password 7. User will click Confirm to continue
Alternative Flows:	N/A
Exceptions:	1. If email is invalid user will see a prompt message "Enter Valid Email" 2. If password does not meet minimum requirements "Password must have minimum 8 characters, digits, alphabet and special character"
Postconditions:	POST-1. User's password will be updated
Business Rules	N/A
Assumptions:	User has an email and can speak English

Table 6: Forget Password (Web).

Use Case ID:	M1-UC6
Use Case Name:	Forget Password (Web)
Actors:	Primary Actor: User
Description:	User will be able to login into SCM account after setting new password.
Trigger:	Click on the "Forget Password" button
Level:	High
Preconditions:	PRE-1. User has Created Account.
Includes:	M1-UC2
Normal Flow:	8. User will click on 'Forget Password' Button 9. User will enter email 10. OTP will be sent to User's email 11. User will OTP 12. User will enter new password 13. User will confirm password 14. User will click Confirm to continue
Alternative Flows:	N/A
Exceptions:	3. If email is invalid user will see a prompt message "Enter Valid Email" 4. If password does not meet minimum requirements "Password must have minimum 8 characters, digits, alphabet and special character"
Postconditions:	POST-1. User's password will be updated
Business Rules	N/A
Assumptions:	User has an email and can speak English

Table 7: Update Profile (Mobile).

Use Case ID:	M1-UC7
Use Case Name:	Update Profile (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to change profile info.
Trigger:	Click on the "Update Profile" button
Level:	Medium
Preconditions:	PRE-1. User has Created Account.
Includes:	M1-UC1, M1-UC3
Normal Flow:	1. User will click on 'Update Profile' Button 2. User will change the fields to be updated 3. User will click Confirm to continue
Alternative Flows:	N/A
Exceptions:	1. If email is invalid user will see a prompt message "Enter Valid Email" 2. If password does not meet minimum requirements "Password must have minimum 8 characters, digits, alphabet and special character"
Postconditions:	POST-1. User's profile info will be changed.
Business Rules	N/A
Assumptions:	User has an email and can speak English

Table 8: Update Profile (Web).

Use Case ID:	M1-UC8
Use Case Name:	Update Profile (Web)
Actors:	Primary Actor: User
Description:	User will be able to change profile info.
Trigger:	Click on the "Update Profile" button
Level:	Medium
Preconditions:	PRE-1. User has Created Account.
Includes:	M1-UC2, M1-UC4
Normal Flow:	1. User will click on 'Update Profile' Button 2. User will change the fields to be updated 3. User will click Confirm to continue
Alternative Flows:	N/A
Exceptions:	1. If email is invalid user will see a prompt message "Enter Valid Email" 2. If password does not meet minimum requirements "Password must have minimum 8 characters, digits, alphabet and special character"
Postconditions:	POST-1. User's profile info will be changed.
Business Rules	N/A
Assumptions:	User has an email and can speak English

Table 9: Profile Privacy (Mobile).

Use Case ID:	M1-UC9
Use Case Name:	Profile Privacy (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to change profile privacy.
Trigger:	Click on the "Profile Privacy" button
Level:	Medium
Preconditions:	PRE-1. User has Created Account.
Includes:	M1-UC1, M1-UC3
Normal Flow:	1. User will click on 'Profile Privacy' Button 2. User will see dropdown ahead of each profile info 3. User may select public or private. 4. The privacy of such field will be updated on dropdown change
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User's profile privacy will be changed.
Business Rules	N/A
Assumptions:	User has knowledge about privacy meanings.

Table 10: Profile Privacy (Web).

Use Case ID:	M1-UC10
Use Case Name:	Profile Privacy (Web)
Actors:	Primary Actor: User
Description:	User will be able to change profile privacy.
Trigger:	Click on the "Profile Privacy" button
Level:	Medium
Preconditions:	PRE-1. User has Created Account.
Includes:	M1-UC1, M1-UC3
Normal Flow:	1. User will click on 'Profile Privacy' Button 2. User will see dropdown ahead of each profile info 3. User may select public or private. 4. The privacy of such field will be updated on dropdown change
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User's profile privacy will be changed.
Business Rules	N/A
Assumptions:	User has knowledge about privacy meanings.

Table 11: Help & Support.

Use Case ID:	M1-UC11
Use Case Name:	Help & Support
Actors:	Primary Actor: User Secondary Actor: SCM
Description:	User will be able to get help from SCM.
Trigger:	Click on the "Help & Support" button
Level:	Low
Preconditions:	N/A.
Includes:	N/A
Normal Flow:	1. User will click on 'Help Support' Button 2. User will be redirected to a webpage with help menu 3. User will navigate in help page as per requirement 4. If User does not find help, user may email at email provided in footer of help page
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User's profile privacy will be changed.
Business Rules	N/A
Assumptions:	User has knowledge about privacy meanings.

Table 12: Remove Account (Mobile).

Use Case ID:	M1-UC12
Use Case Name:	Remove Account (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to Remove Account.
Trigger:	Click on the "Delete Account" button
Level:	Medium
Preconditions:	PRE-1: User has created account.
Includes:	M1-UC1, M1-UC3
Normal Flow:	1. User will click on 'Delete Account' Button 2. OTP will be sent user's email. 3. User will enter OTP from email. 4. User will enter Password 5. User will confirm account deletion.
Alternative Flows:	N/A
Exceptions:	1. If password does not meet minimum requirements "Password must have minimum 8 characters, digits, alphabet and special character" 2. User enters invalid OTP "Prompt Message saying Enter Valid OTP"
Postconditions:	POST-1. User's profile will be removed.
Business Rules	N/A
Assumptions:	User has knowledge about account removal. User knows that the process is irreversible.

Table 13: Remove Account (Web).

Use Case ID:	M1-UC13
Use Case Name:	Remove Account (Web)
Actors:	Primary Actor: User
Description:	User will be able to Remove Account.
Trigger:	Click on the "Delete Account" button
Level:	Medium
Preconditions:	PRE-1: User has created account.
Includes:	M1-UC2, M1-UC4
Normal Flow:	1. User will click on 'Delete Account' Button 2. OTP will be sent user's email. 3. User will enter OTP from email. 4. User will enter Password 5. User will confirm account deletion.
Alternative Flows:	N/A
Exceptions:	3. If password does not meet minimum requirements "Password must have minimum 8 characters, digits, alphabet and special character" 4. User enters invalid OTP "Prompt Message saying Enter Valid OTP"
Postconditions:	POST-1. User's profile will be removed.
Business Rules	N/A
Assumptions:	User has knowledge about account removal. User knows that the process is irreversible.

Table 14: App Settings (Mobile).

Use Case ID:	M1-UC14
Use Case Name:	App Settings (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to Change Application Settings.
Trigger:	Click on the "Settings" button
Level:	Medium
Preconditions:	N/A.
Includes:	N/A
Normal Flow:	1. User will click on 'Settings' Button 2. User may change app theme (Follow System, Dark or Light). 3. User may Logout. 4. User may change current location.
Alternative Flows:	N/A
Exceptions:	1. If user does not have GPS on then prompt message will appear "Turn on GPS to get current location"
Postconditions:	POST-1. User's account will be logged out. POST-2. User's theme will be changed. POST-3. User's location will be changed.
Business Rules	N/A
Assumptions:	User has knowledge about location and themes.

Table 15: App Settings (Web).

Use Case ID:	M1-UC15
Use Case Name:	App Settings (Web)
Actors:	Primary Actor: User
Description:	User will be able to Change Application Settings.
Trigger:	Click on the "Settings" button
Level:	Medium
Preconditions:	N/A.
Includes:	N/A
Normal Flow:	1. User will click on 'Settings' Button 2. User may change app theme (Follow System, Dark or Light). 3. User may Logout. 4. User may change current location.
Alternative Flows:	N/A
Exceptions:	1. If user does not have GPS on then prompt message will appear "Turn on GPS to get current location"
Postconditions:	POST-1. User's account will be logged out. POST-2. User's theme will be changed. POST-3. User's location will be changed.
Business Rules	N/A
Assumptions:	User has knowledge about location and themes.

Table 16: Notifications (Mobile).

Use Case ID:	M1-UC16
Use Case Name:	Notifications (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to Change Notifications Settings.
Trigger:	Click on the "Notifications" button
Level:	Medium
Preconditions:	N/A.
Includes:	N/A
Normal Flow:	1. User will click on 'Notifications Settings' Button 2. User may toggle all notifications off. 3. User may toggle messaging notification 4. User may toggle ADs notification
Alternative Flows:	N/A
Exceptions:	2. If user does not have GPS on then prompt message will appear "Turn on GPS to get current location"
Postconditions:	POST-1. User's account will be logged out. POST-2. User's theme will be changed. POST-3. User's location will be changed.
Business Rules	N/A
Assumptions:	User has knowledge about location and themes.

Table 17: Notifications (Web).

Use Case ID:	M1-UC17
Use Case Name:	Notifications (Web)
Actors:	Primary Actor: User
Description:	User will be able to Change Notifications Settings.
Trigger:	Click on the "Notifications" button
Level:	Medium
Preconditions:	N/A.
Includes:	N/A
Normal Flow:	5. User will click on 'Notifications Settings' Button 6. User may toggle all notifications off. 7. User may toggle messaging notification 8. User may toggle ADs notification
Alternative Flows:	N/A
Exceptions:	3. If user does not have GPS on then prompt message will appear "Turn on GPS to get current location"
Postconditions:	POST-1. User's account will be logged out. POST-2. User's theme will be changed. POST-3. User's location will be changed.
Business Rules	N/A
Assumptions:	User has knowledge about location and themes.

Table 18: Subscription.

Use Case ID:	M1-UC18
Use Case Name:	Subscription.
Actors:	Primary Actor: User Secondary Actor: SCM
Description:	User will be able to Subscribe to Newsletter.
Trigger:	Click on the "Subscribe" button
Level:	Medium
Preconditions:	N/A.
Includes:	N/A
Normal Flow:	1. User will enter email on text field 2. User will press subscribe button.
Alternative Flows:	N/A
Exceptions:	4. If user does not have GPS on then prompt message will appear "Turn on GPS to get current location"
Postconditions:	POST-1. User's account will be logged out. POST-2. User's theme will be changed. POST-3. User's location will be changed.
Business Rules	N/A
Assumptions:	User has knowledge about location and themes.

4.2.2 Module 2: Buy and Sell

Following are the Tabular Use Cases for second module.

Table 19: Post ad (Web).

Use Case ID:	M2-UC1
Use Case Name:	Post ad (Web)
Actors:	Primary Actor: User
Description:	User will be able to post ad
Trigger:	Click on the "Post ad" button
Level:	Medium
Preconditions:	PRE-1. User has logged in the account.
Includes:	M1-UC2, M1-UC4
Normal Flow:	1. User will click on the post ad button 2. User will select the ad category 3. User will enter ad description 4. User will enter service price 5. User will enter service location 6. User will press 'post' button
Alternative Flows:	N/A
Exceptions:	9a. if user doesn't fill all the fields 1. Prompt message will appear "please enter all fields"
Postconditions:	POST-1. User will be able to post an ad
Business Rules	N/A
Assumptions:	User has an active internet connection. User has installed the application. User has an account.

Table 20: Post ad (Mobile).

Use Case ID:	M2-UC2
Use Case Name:	Post ad (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to post ad
Trigger:	Click on the "Post ad" button
Level:	Medium
Preconditions:	PRE-1. User has logged in the account.
Includes:	M1-UC1, M1-UC3
Normal Flow:	1. User will click on the post ad button 2. User will select the ad category 3. User will enter ad description 4. User will enter service price 5. User will enter service location 6. User will press 'post' button
Alternative Flows:	N/A
Exceptions:	9a. if user doesn't fill all the fields 2. Prompt message will appear "please enter all fields"
Postconditions:	POST-1. User will be able to post an ad
Business Rules	N/A
Assumptions:	User has an active internet connection. User has installed the application. User has an account.

Table 21: Edit ad (Web).

Use Case ID:	M2-UC3
Use Case Name:	Edit ad
Actors:	Primary Actor: User Secondary Actor: Smart Construction Manager
Description:	User will be able to Edit an ad
Trigger:	Click on the "Edit ad" button
Level:	Medium
Preconditions:	PRE-1. User has logged in the account.
Includes:	M1-UC2, M1-UC4
Normal Flow:	1. User will select my adds button 2. User will click on the edit ad button 3. User will select the desired posted ad 4. User will click ok button
Alternative Flows:	N/A
Exceptions:	2a if user doesn't select the desired ad 1. Prompt message will appear "please select the desired ad"
Postconditions:	POST-1. User will be able to delete an ad
Business Rules	N/A
Assumptions:	User has an active internet connection. User has installed the application. User has an account.

Table 22: Edit ad (Mobile).

Use Case ID:	M2-UC-4
Use Case Name:	Edit ad
Actors:	Primary Actor: User Secondary Actor: Smart Construction Manager
Description:	User will be able to Edit an ad
Trigger:	Click on the "Edit ad" button
Level:	Medium
Preconditions:	PRE-1. User has logged in the account.
Includes:	M1-UC1, M1-UC3
Normal Flow:	5. User will select my adds button 6. User will click on the edit ad button 7. User will select the desired posted ad 8. User will click ok button
Alternative Flows:	N/A
Exceptions:	2a if user doesn't select the desired ad 2. Prompt message will appear "please select the desired ad"
Postconditions:	POST-1. User will be able to delete an ad
Business Rules	N/A
Assumptions:	User has an active internet connection. User has installed the application. User has an account.

Table 23: Delete ad (Web).

Use Case ID:	M2-UC5
Use Case Name:	Delete ad
Actors:	Primary Actor: User Secondary Actor: Smart Construction Manager
Description:	User will be able to Delete an ad
Trigger:	Click on the "Delete ad" button
Level:	Medium
Preconditions:	PRE-1. User has logged in the account.
Includes:	M1-UC2, M1-UC4
Normal Flow:	1. User will select my adds button 2. User will click on the delete ad button 3. User will select the desired posted ad 4. User will click ok button
Alternative Flows:	N/A
Exceptions:	2a if user doesn't select the desired ad 3. Prompt message will appear "please select the desired ad"
Postconditions:	POST-1. User will be able to delete an ad
Business Rules	N/A
Assumptions:	User has an active internet connection. User has installed the application. User has an account.

Table 24: Delete ad (Mobile).

Use Case ID:	M2-UC6
Use Case Name:	Delete ad
Actors:	Primary Actor: User Secondary Actor: Smart Construction Manager
Description:	User will be able to Delete an ad
Trigger:	Click on the "Delete ad" button
Level:	Medium
Preconditions:	PRE-1. User has logged in the account.
Includes:	M1-UC1, M1-UC3
Normal Flow:	1. User will select my adds button 2. User will click on the delete ad button 3. User will select the desired posted ad 4. User will click ok button
Alternative Flows:	N/A
Exceptions:	2a if user doesn't select the desired ad 4. Prompt message will appear "please select the desired ad"
Postconditions:	POST-1. User will be able to delete an ad
Business Rules	N/A
Assumptions:	User has an active internet connection. User has installed the application. User has an account.

Table 25: View ad (Web).

Use Case ID:	M2-UC7
Use Case Name:	View ad
Actors:	Primary Actor: User Secondary Actor: Smart Construction Manager
Description:	User will be able to View a posted ad
Trigger:	Click on the "View ad" button
Level:	Medium
Preconditions:	PRE-1. User has logged in the account.
Includes:	M1-UC2, M1-UC4
Normal Flow:	1. User will click on the ad button 2. User will see the ad 3. Add will be saved to view history
Alternative Flows:	N/A
Exceptions:	2a if user doesn't select the desired ad 1. Prompt message will appear "please select the desired ad"
Postconditions:	POST-1. User will be able to view a desired ad.
Business Rules	N/A
Assumptions:	User has an active internet connection. User has installed the application. User has an account.

Table 26: View ad (Mobile).

Use Case ID:	M2-UC8
Use Case Name:	View ad (Mobile)
Actors:	Primary Actor: User Secondary Actor: Smart Construction Manager
Description:	User will be able to View a posted ad
Trigger:	Click on the "View ad" button
Level:	Medium
Preconditions:	PRE-1. User has logged in the account.
Includes:	M1-UC1, M1-UC3
Normal Flow:	1. User will click on the ad button 2. User will see the ad 3. Add will be saved to view history
Alternative Flows:	N/A
Exceptions:	2a if user doesn't select the desired ad 2. Prompt message will appear "please select the desired ad"
Postconditions:	POST-1. User will be able to view a desired ad.
Business Rules	N/A
Assumptions:	User has an active internet connection. User has installed the application. User has an account.

Table 27: History (Web).

Use Case ID:	M2-UC9
Use Case Name:	History (Web)
Actors:	Primary Actor: User Secondary Actor: Smart Construction Manager
Description:	User will be able to manage a viewed ad history
Trigger:	Click on the "View ads history" button
Level:	Medium
Preconditions:	PRE-1. User has logged in the account.
Includes:	M1-UC2, M1-UC4
Normal Flow:	1. User will click on the history button 2. User will see all the ads viewed 3. User can turn off history 4. User can clear history
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will be able to view history.
Business Rules	N/A
Assumptions:	User has an active internet connection. User has installed the application. User has an account.

Table 28: History (Mobile).

Use Case ID:	M2-UC10
Use Case Name:	History (Mobile)
Actors:	Primary Actor: User Secondary Actor: Smart Construction Manager
Description:	User will be able to manage a viewed ad history
Trigger:	Click on the "View ads history" button
Level:	Medium
Preconditions:	PRE-1. User has logged in the account.
Includes:	M1-UC1, M1-UC3
Normal Flow:	5. User will click on the history button 6. User will see all the ads viewed 7. User can turn off history 8. User can clear history
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will be able to view history.
Business Rules	N/A
Assumptions:	User has an active internet connection. User has installed the application. User has an account.

Table 29: Favorite Ad (Web).

Use Case ID:	M2-UC11
Use Case Name:	Favorite Ad (Web)
Actors:	Primary Actor: User
Description:	User will be able to Favorite Ad and manage them
Trigger:	Click on the "Heart" icon on any ad
Level:	Medium
Preconditions:	PRE-1. User has logged in the account.
Includes:	M1-UC2, M1-UC4
Normal Flow:	1. User will click on the add to view 2. User press heart icon on add. 3. User can manage favorites in favorites list 4. User can clear favorites
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will be able to view history.
Business Rules	N/A
Assumptions:	User has an active internet connection. User has installed the application. User has an account.

Table 30: Favorite Ad (Mobile).

Use Case ID:	M2-UC12
Use Case Name:	Favorite Ad (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to Favorite Ad and manage them
Trigger:	Click on the "Heart" icon on any ad
Level:	Medium
Preconditions:	PRE-1. User has logged in the account.
Includes:	M1-UC2, M1-UC4
Normal Flow:	1. User will click on the add to view 2. User press heart icon on add. 3. User can manage favorites in favorites list 4. User can clear favorites
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will be able to view history.
Business Rules	N/A
Assumptions:	User has an active internet connection. User has installed the application. User has an account.

4.2.3 Module 3: Search

Following are the Tabular Use Cases for third module

Table 31: Search by Text (Web).

Use Case ID:	M3-UC1
Use Case Name:	Search by Text (Web)
Actors:	Primary Actor: User
Description:	User will be able to Search Ad
Trigger:	Click on the "Search" Bar.
Level:	High
Preconditions:	N/A.
Includes:	N/A
Normal Flow:	1. User visits SCM website. 2. User will click on search bar 3. User types the text they want to search. 4. User will see list of relevant results
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will be ads relevant to text typed.
Business Rules	N/A
Assumptions:	User can speak English.

Table 32: Search by Text (Mobile).

Use Case ID:	M3-UC2
Use Case Name:	Search by Text (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to Search Ad
Trigger:	Click on the "Search" Bar.
Level:	High
Preconditions:	N/A.
Includes:	N/A
Normal Flow:	1. User visits SCM website. 2. User will click on search bar 3. User types the text they want to search. 4. User will see list of relevant results
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will be ads relevant to text typed.
Business Rules	N/A
Assumptions:	User can speak English.

Table 33: Search by Audio (Web).

Use Case ID:	M3-UC3
Use Case Name:	Search by Audio (Web)
Actors:	Primary Actor: User
Description:	User will be able to Search Ad
Trigger:	Click on the "Search" Bar.
Level:	High
Preconditions:	N/A.
Includes:	N/A
Normal Flow:	1. User visits SCM website. 2. User will click on search bar 3. User presses speaker icon and starts speaking 4. Speech is converted to text and displayed on search bar. 5. User will see list of search results
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will be ads relevant to text typed.
Business Rules	N/A
Assumptions:	User can speak English.

Table 34: Search by Audio (Mobile).

Use Case ID:	M3-UC4
Use Case Name:	Search by Audio (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to Search Ad
Trigger:	Click on the "Search" Bar.
Level:	High
Preconditions:	N/A.
Includes:	N/A
Normal Flow:	1. User visits SCM website. 2. User will click on search bar 3. User presses speaker icon and starts speaking 4. Speech is converted to text and displayed on search bar. 5. User will see list of search results
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will be ads relevant to text typed.
Business Rules	N/A
Assumptions:	User can speak English.

Table 35: Filters (Web).

Use Case ID:	M3-UC5
Use Case Name:	Filters (Web)
Actors:	Primary Actor: User
Description:	User will be able to Filter Search results
Trigger:	Click on the "Filter" Button.
Level:	High
Preconditions:	N/A.
Includes:	N/A
Normal Flow:	1. User visits SCM website. 2. User will click on filter button. 3. User checks the fields user want to be displayed. 4. User will see list of filtered search results
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will see ads relevant to text typed.
Business Rules	N/A
Assumptions:	User can speak English.

Table 36: Filters (Mobile).

Use Case ID:	M3-UC6
Use Case Name:	Filters (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to Filter Search results
Trigger:	Click on the "Filter" Button.
Level:	High
Preconditions:	N/A.
Includes:	N/A
Normal Flow:	1. User visits SCM website. 2. User will click on filter button. 3. User checks the fields user want to be displayed. 4. User will see list of filtered search results
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will see ads relevant to text typed.
Business Rules	N/A
Assumptions:	User can speak English.

Table 37: Suggestions (Web).

Use Case ID:	M3-UC7
Use Case Name:	Suggestions (Web)
Actors:	Primary Actor: User
Description:	User will be able to see search suggestions before typing.
Trigger:	Click on the "Search" Bar.
Level:	High
Preconditions:	PRE-1: User has entered something on text area.
Includes:	N/A
Normal Flow:	1. User visits SCM website. 2. User will click on Search button. 3. User types on text field. 4. User will see list of search suggestions in dropdown below search bar.
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will see ads relevant to text typed.
Business Rules	N/A
Assumptions:	User can speak English.

Table 38: Suggestions (Mobile).

Use Case ID:	M3-UC8
Use Case Name:	Suggestions (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to see search suggestions before typing.
Trigger:	Click on the "Search" Bar.
Level:	High
Preconditions:	PRE-1: User has entered something on text area.
Includes:	N/A
Normal Flow:	1. User visits SCM website. 2. User will click on Search button. 3. User types on text field. 4. User will see list of search suggestions in dropdown below search bar.
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will see ads relevant to text typed.
Business Rules	N/A
Assumptions:	User can speak English.

4.2.4 Module 4: Chat

Following are the Tabular Use Cases for fourth module.

Table 39: New Conversation (Web).

Use Case ID:	M4-UC1
Use Case Name:	New Conversation (Web)
Actors:	Primary Actor: User
Description:	User will be able to start a chat with another user.
Trigger:	Click on the "+" icon in chat menu.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC2, M1-UC4
Normal Flow:	1. User will click on + button. 2. User will enter name of recipient. 3. User selects the recipient from searched results 4. User types text in text area and starts chatting.
Alternative Flows:	1. User views an add 2. User press chat button in the add 3. New Conversation is started with the user who posted the ad
Exceptions:	1. If user enters the name that does not belong to any SCM account user will see prompt message "No results found"
Postconditions:	POST-1. User will be able to send message to another user.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 40: New Conversation (Mobile).

Use Case ID:	M4-UC2
Use Case Name:	New Conversation (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to start a chat with another user.
Trigger:	Click on the "+" icon in chat menu.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC1, M1-UC3
Normal Flow:	1. User will click on + button. 2. User will enter name of recipient. 3. User selects the recipient from searched results 4. User types text in text area and starts chatting.
Alternative Flows:	1. User views an add 2. User press chat button in the add 3. New Conversation is started with the user who posted the ad
Exceptions:	1. If user enters the name that does not belong to any SCM account user will see prompt message "No results found"
Postconditions:	POST-1. User will be able to send message to another user.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 41: Delete Conversation (Web).

Use Case ID:	M4-UC3
Use Case Name:	Delete Conversation (Web)
Actors:	Primary Actor: User
Description:	User will be able to delete a chat.
Trigger:	Press and hold the conversation
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC1, M1-UC3, M4-UC1
Normal Flow:	1. User will click and hold the conversation. 2. User will press delete button. 3. A confirmation dialog box appears 4. User presses ok to delete the chat
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User's conversation will be deleted.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 42: Delete Conversation (Mobile).

Use Case ID:	M4-UC4
Use Case Name:	Delete Conversation (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to delete a chat.
Trigger:	Press and hold the conversation.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC2, M1-UC4, M4-UC2
Normal Flow:	1. User will click and hold the conversation. 2. User will press delete button. 3. A confirmation dialog box appears 4. User presses ok to delete the chat
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User's conversation will be deleted.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 43: Archive Conversation (Web).

Use Case ID:	M4-UC5
Use Case Name:	Archive Conversation (Web)
Actors:	Primary Actor: User
Description:	User will be able to archive a chat.
Trigger:	Press and hold the conversation
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC1, M1-UC3, M4-UC1
Normal Flow:	1. User will click and hold the conversation. 2. User will press archive button. 3. A confirmation dialog box appears 4. User presses ok to delete the chat
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User's conversation will be archived.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 44: Archive Conversation (Mobile).

Use Case ID:	M4-UC6
Use Case Name:	Archive Conversation (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to archive a chat.
Trigger:	Press and hold the conversation
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC2, M1-UC4, M4-UC2
Normal Flow:	1. User will click and hold the conversation. 2. User will press archive button. 3. A confirmation dialog box appears 4. User presses ok to delete the chat
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User's conversation will be archive.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 45: See Archive Conversation (Web).

Use Case ID:	M4-UC7
Use Case Name:	See Archive Conversation (Web)
Actors:	Primary Actor: User
Description:	User will be able to see archived a chat.
Trigger:	Press 'Archive' button in end of chat list
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC1, M1-UC3, M4-UC1, M4-UC5
Normal Flow:	1. User will scroll to the bottom of chats. 2. User will press archive button. 3. User will see archived chats
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User's conversation will be archive.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 46: See Archive Conversation (Mobile).

Use Case ID:	M4-UC8
Use Case Name:	See Archive Conversation (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to see archived a chat.
Trigger:	Press 'Archive' button in end of chat list
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC2, M1-UC4, M4-UC2, M4-UC6
Normal Flow:	1. User will scroll to the bottom of chats. 2. User will press archive button. 3. User will see archived chats
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User's conversation will be archive.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 47: Send Text (Web).

Use Case ID:	M4-UC9
Use Case Name:	Send Text (Web)
Actors:	Primary Actor: User
Description:	User will be able to send text message.
Trigger:	Press 'Send button.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC1, M1-UC3, M4-UC1
Normal Flow:	1. User will select conversation from list. 2. User will enter text in provided text field. 3. User will press send button.
Alternative Flows:	1. User selects chat button from ad. 2. User will be redirected to the conversation 3. User will enter text in provided text field. 4. User will press send button.
Exceptions:	If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please"
Postconditions:	POST-1. User's message will be sent.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 48: Send Text (Mobile).

Use Case ID:	M4-UC10
Use Case Name:	Send Text (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to send text message.
Trigger:	Press 'Send button.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC2, M1-UC4, M4-UC2
Normal Flow:	1. User will select conversation from list. 2. User will enter text in provided text field. 3. User will press send button.
Alternative Flows:	1. User selects chat button from ad. 2. User will be redirected to the conversation 3. User will enter text in provided text field. 4. User will press send button.
Exceptions:	If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please"
Postconditions:	POST-1. User's message will be sent.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 49: Send File (Web).

Use Case ID:	M4-UC11
Use Case Name:	Send File (Web)
Actors:	Primary Actor: User
Description:	User will be able to send file in message.
Trigger:	Press 'Send' button.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC1, M1-UC3, M4-UC1
Normal Flow:	1. User will select conversation from list. 2. User will select attach file. 3. User will see option to select image/audio/video/file 4. User will select file from the device 5. User will press send button.
Alternative Flows:	1. User selects chat button from ad. 2. User will be redirected to the conversation 3. User will select attach file. 4. User will see option to select image/audio/video/file 5. User will select file from the device 6. User will press send button.
Exceptions:	If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please"
Postconditions:	POST-1. User's message will be sent.
Business Rules	N/A
Assumptions:	User can navigate to chat menu. User has a file in the system.

Table 50: Send File (Mobile).

Use Case ID:	M4-UC12
Use Case Name:	Send File (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to send file in message.
Trigger:	Press 'Send' button.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC1, M1-UC3, M4-UC1
Normal Flow:	1. User will select conversation from list. 2. User will select attach file. 3. User will see option to select image/audio/video/file 4. User will select file from the device 5. User will press send button.
Alternative Flows:	1. User selects chat button from ad. 2. User will be redirected to the conversation 3. User will select attach file. 4. User will see option to select image/audio/video/file 5. User will select file from the device 6. User will press send button.
Exceptions:	If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please"
Postconditions:	POST-1. User's message will be sent.
Business Rules	N/A
Assumptions:	User can navigate to chat menu. User has a file in the system.

Table 51: Send File (Web).

Use Case ID:	M4-UC11
Use Case Name:	Send File (Web)
Actors:	Primary Actor: User
Description:	User will be able to send file in message.
Trigger:	Press 'Send' button.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC1, M1-UC3, M4-UC1
Normal Flow:	6. User will select conversation from list. 7. User will select attach file. 8. User will see option to select image/audio/video/file 9. User will select file from the device 10. User will press send button.
Alternative Flows:	7. User selects chat button from ad. 8. User will be redirected to the conversation 9. User will select attach file. 10. User will see option to select image/audio/video/file 11. User will select file from the device 12. User will press send button.
Exceptions:	If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please"
Postconditions:	POST-1. User's message will be sent.
Business Rules	N/A
Assumptions:	User can navigate to chat menu. User has a file in the system.

Use Case ID:	M4-UC12
Use Case Name:	Send File (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to send file in message.
Trigger:	Press 'Send' button.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC2, M1-UC4, M4-UC2
Normal Flow:	1. User will select conversation from list. 2. User will select attach file. 3. User will see option to select image/audio/video/file 4. User will select file from the device 5. User will press send button.
Alternative Flows:	1. User selects chat button from ad. 2. User will be redirected to the conversation 3. User will select attach file. 4. User will see option to select image/audio/video/file 5. User will select file from the device 6. User will press send button.
Exceptions:	If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please"
Postconditions:	POST-1. User's message will be sent.
Business Rules	N/A
Assumptions:	User can navigate to chat menu. User has a file in the system.

Table 53: Send Location (Web).

Use Case ID:	M4-UC13
Use Case Name:	Send Location (Web)
Actors:	Primary Actor: User
Description:	User will be able to send location in message.
Trigger:	Press 'Send' button.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC2, M1-UC4, M4-UC2
Normal Flow:	1. User will select conversation from list. 2. User will select location icon. 3. User will see a map. 4. User may drop pin or select current location. 5. User will press send button.
Alternative Flows:	1. User selects chat button from ad. 2. User will be redirected to the conversation 3. User will select location icon. 4. User will see a map. 5. User may drop pin or select current location. 6. User will press send button.
Exceptions:	1. If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please" 2. If user has not turned GPS on prompt message will appear "Turn on GPS'
Postconditions:	POST-1. User's location will be sent.
Business Rules	N/A
Assumptions:	User can navigate to chat menu. User has maps installed.

Table 54: Send Location (Mobile).

Use Case ID:	M4-UC14
Use Case Name:	Send Location (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to send location in message.
Trigger:	Press 'Send' button.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC1, M1-UC3, M4-UC1
Normal Flow:	1. User will select conversation from list. 2. User will select location icon. 3. User will see a map. 4. User may drop pin or select current location. 5. User will press send button.
Alternative Flows:	1. User selects chat button from ad. 2. User will be redirected to the conversation 3. User will select location icon. 4. User will see a map. 5. User may drop pin or select current location. 6. User will press send button.
Exceptions:	1. If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please" 2. If user has not turned GPS on prompt message will appear "Turn on GPS'
Postconditions:	POST-1. User's location will be sent.
Business Rules	N/A
Assumptions:	User can navigate to chat menu. User has maps installed.

Table 55: Send Link (Web).

Use Case ID:	M4-UC15
Use Case Name:	Send Link (Web)
Actors:	Primary Actor: User
Description:	User will be able to send link with preview in message.
Trigger:	Press 'Send' button.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC2, M1-UC4, M4-UC1
Normal Flow:	1. User will select conversation from list. 2. User will paste link. 3. User will see a link preview. 4. User will press send button.
Alternative Flows:	1. User selects chat button from ad. 2. User will be redirected to the conversation 3. User will paste link. 4. User will see a link preview. 5. User will press send button.
Exceptions:	1. If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please" 2. And Link preview will not appear
Postconditions:	POST-1. User's location will be sent.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 56: Send Link (Mobile).

Use Case ID:	M4-UC16
Use Case Name:	Send Link (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to send link with preview in message.
Trigger:	Press 'Send' button.
Level:	High
Preconditions:	PRE-1: User has logged in.
Includes:	M1-UC1, M1-UC3, M4-UC2
Normal Flow:	1. User will select conversation from list. 2. User will paste link. 3. User will see a link preview. 4. User will press send button.
Alternative Flows:	1. User selects chat button from ad. 2. User will be redirected to the conversation 3. User will paste link. 4. User will see a link preview. 5. User will press send button.
Exceptions:	3. If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please" 4. And Link preview will not appear
Postconditions:	POST-1. User's location will be sent.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 57: Delete Message (Web).

Use Case ID:	M4-UC17
Use Case Name:	Delete Message (Web)
Actors:	Primary Actor: User
Description:	User will be able to delete message from conversation.
Trigger:	Press and hold a message in conversation.
Level:	High
Preconditions:	PRE-1: User has logged in. PRE-2: User has started a conversation PRE-3: User has sent a message
Includes:	M1-UC2, M1-UC4, M4-UC1
Normal Flow:	1. User will select conversation from list. 2. User will press and hold a message. 3. User will select delete. 4. User will press ok to confirm deletion.
Alternative Flows:	1. User selects chat button from ad. 2. User will be redirected to the conversation 3. User will press and hold a message. 4. User will select delete. 5. User will press ok to confirm deletion
Exceptions:	1. If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please"
Postconditions:	POST-1. Message will be cleared form conversation.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 58: Delete Message (Mobile).

Use Case ID:	M4-UC18
Use Case Name:	Delete Message (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to delete message from conversation.
Trigger:	Press and hold a message in conversation.
Level:	High
Preconditions:	PRE-1: User has logged in. PRE-2: User has started a conversation PRE-3: User has sent a message
Includes:	M1-UC1, M1-UC3, M4-UC2
Normal Flow:	1. User will select conversation from list. 2. User will press and hold a message. 3. User will select delete. 4. User will press ok to confirm deletion.
Alternative Flows:	1. User selects chat button from ad. 2. User will be redirected to the conversation 3. User will press and hold a message. 4. User will select delete. 5. User will press ok to confirm deletion
Exceptions:	1. If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please"
Postconditions:	POST-1. Message will be cleared form conversation.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 59: Delete for All (Web).

Use Case ID:	M4-UC19
Use Case Name:	Delete for All (Web)
Actors:	Primary Actor: User
Description:	User will be able to delete message for recipient's conversation also.
Trigger:	Press and hold a message in conversation.
Level:	High
Preconditions:	PRE-1: User has logged in. PRE-2: User has started a conversation PRE-3: User has sent a message
Includes:	M1-UC2, M1-UC4, M4-UC1
Normal Flow:	1. User will select conversation from list. 2. User will press and hold a message. 3. User will select delete. 4. User will press ok to all to confirm deletion.
Alternative Flows:	1. User selects chat button from ad. 2. User will be redirected to the conversation 3. User will press and hold a message. 1. User will select delete. 2. User will press ok to all to confirm deletion
Exceptions:	2. If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please"
Postconditions:	POST-1. Message will be cleared form conversation. POST-2. Message will be cleared form recipient's conversation.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

Table 60: Delete for All (Mobile).

Use Case ID:	M4-UC20
Use Case Name:	Delete for All (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to delete message for recipient's conversation also.
Trigger:	Press and hold a message in conversation.
Level:	High
Preconditions:	PRE-1: User has logged in. PRE-2: User has started a conversation PRE-3: User has sent a message
Includes:	M1-UC2, M1-UC4, M4-UC1
Normal Flow:	5. User will select conversation from list. 6. User will press and hold a message. 7. User will select delete. 8. User will press ok to all to confirm deletion.
Alternative Flows:	4. User selects chat button from ad. 5. User will be redirected to the conversation 6. User will press and hold a message. 3. User will select delete. 4. User will press ok to all to confirm deletion
Exceptions:	3. If user is not connected to the internet prompt message will appear "Cannot send message! Connect to the internet please"
Postconditions:	POST-1. Message will be cleared form conversation. POST-2. Message will be cleared form recipient's conversation.
Business Rules	N/A
Assumptions:	User can navigate to chat menu.

4.2.5 Module 5: Recommendations Tab

Following are the Tabular Use Cases for fifth module.

Table 61: Process Recommendations (Web).

Use Case ID:	M5-UC1
Use Case Name:	Process Recommendations (Web)
Actors:	Primary Actor: SCM
Description:	SCM will take user's history and feedback to fetch relevant posts for user.
Trigger:	User login and opening home page.
Level:	High
Preconditions:	PRE-1: User has logged in. PRE-2: User has viewed ads PRE-3: User has favorited ads PRE-4: User has searched.
Includes:	M2-UC7, M2-UC-9, M2-UC11
Normal Flow:	1. User will login into app. 2. SCM will take user's data. 3. SCM will process data. 4. SCM will improve model to match user's requirement.
Alternative Flows:	N/A
Exceptions:	1. If user does not have any data recommendations tab will not appear
Postconditions:	POST-1. SCM will be ready to identify item as relevant or irrelevant.
Business Rules	N/A
Assumptions:	User wants relevant content.

Table 62: Process Recommendations (Mobile).

Use Case ID:	M5-UC2
Use Case Name:	Process Recommendations (Mobile)
Actors:	Primary Actor: SCM
Description:	SCM will take user's history and feedback to fetch relevant posts for user.
Trigger:	User login and opening home page.
Level:	High
Preconditions:	PRE-1: User has logged in. PRE-2: User has viewed ads PRE-3: User has favorited ads PRE-4: User has searched.
Includes:	M2-UC8, M2-UC-10, M2-UC12
Normal Flow:	1. User will login into app. 2. SCM will take user's data. 3. SCM will process data. 4. SCM will improve model to match user's requirement.
Alternative Flows:	N/A
Exceptions:	2. If user does not have any data recommendations tab will not appear
Postconditions:	POST-1. SCM will be ready to identify item as relevant or irrelevant.
Business Rules	N/A
Assumptions:	User wants relevant content.

Table 63: Show Recommendations (Web).

Use Case ID:	M5-UC3
Use Case Name:	Show Recommendations (Web)
Actors:	Primary Actor: SCM
Description:	SCM will show user relevant posts.
Trigger:	User login and opening home page.
Level:	High
Preconditions:	PRE-1: User has logged in. PRE-2: User has viewed ads PRE-3: User has favorited ads PRE-4: User has searched.
Includes:	M2-UC7, M2-UC-9, M2-UC11, M5-UC1
Normal Flow:	1. SCM will show user recommendations 2. User will click on recommendations button to see more recommendations
Alternative Flows:	N/A
Exceptions:	3. If user does not have any data recommendations tab will not appear
Postconditions:	POST-1. User will see relevant content.
Business Rules	N/A
Assumptions:	User wants relevant content.

Table 64: Show Recommendations (Mobile).

Use Case ID:	M5-UC4
Use Case Name:	Show Recommendations (Mobile)
Actors:	Primary Actor: SCM
Description:	SCM will show user relevant posts.
Trigger:	User login and opening home page.
Level:	High
Preconditions:	PRE-1: User has logged in. PRE-2: User has viewed ads PRE-3: User has favorited ads PRE-4: User has searched.
Includes:	M2-UC8, M2-UC-10, M2-UC12, M5-UC2
Normal Flow:	1. SCM will show user recommendations 2. User will click on recommendations button to see more recommendations
Alternative Flows:	N/A
Exceptions:	4. If user does not have any data recommendations tab will not appear
Postconditions:	POST-1. User will see relevant content.
Business Rules	N/A
Assumptions:	User wants relevant content.

Table 65: Take Feedback (Web).

Use Case ID:	M5-UC5
Use Case Name:	Take Feedback (Web)
Actors:	Primary Actor: User
Description:	User will select recommended post as relevant or irrelevant.
Trigger:	User login and opening home page.
Level:	High
Preconditions:	PRE-1: User has logged in. PRE-2: User has viewed ads PRE-3: User has favorited ads PRE-4: User has searched.
Includes:	M2-UC7, M2-UC-9, M2-UC11, M5-UC1
Normal Flow:	1. SCM will show user recommendations 2. User will select recommendations 3. User will select relevant or irrelevant from the dropdown. 4. SCM will not recommend that content again
Alternative Flows:	N/A
Exceptions:	1. If user does not have any data recommendations tab will not appear
Postconditions:	POST-1. SCM will adapt towards user's behavior
Business Rules	N/A
Assumptions:	User wants relevant content.

Table 66: Take Feedback (Mobile).

Use Case ID:	M5-UC6
Use Case Name:	Take Feedback (Mobile)
Actors:	Primary Actor: User
Description:	User will select recommended post as relevant or irrelevant.
Trigger:	User login and opening home page.
Level:	High
Preconditions:	PRE-1: User has logged in. PRE-2: User has viewed ads PRE-3: User has favorited ads PRE-4: User has searched.
Includes:	M2-UC8, M2-UC-10, M2-UC12, M5-UC2
Normal Flow:	1. SCM will show user recommendations 2. User will select recommendations 3. User will select relevant or irrelevant from the dropdown. 4. SCM will not recommend that content again
Alternative Flows:	N/A
Exceptions:	2. If user does not have any data recommendations tab will not appear
Postconditions:	POST-1. SCM will adapt towards user's behavior
Business Rules	N/A
Assumptions:	User wants relevant content.

4.2.6 Module 6: Map Making (3D Models)

Following are the Tabular Use Cases for sixth module

Table 67: Pre-Built Models.

Use Case ID:	M6-UC1
Use Case Name:	Pre-Built Models
Actors:	Primary Actor: SCM Secondary Actor: User
Description:	SCM will provide user the pre-built designs of homes in application.
Trigger:	User clicks on 'models' button
Level:	High
Preconditions:	PRE-1: User has logged in. .
Includes:	N/A
Normal Flow:	1. SCM will provide user multiple designs of homes 2. User will see these designs by pressing models' button 3. User will see list of models with their short description
Alternative Flows:	N/A
Exceptions:	1. If user does not have internet the model will not be downloaded and user will see error
Postconditions:	POST-1. User will have full experience of viewing 3D Object
Business Rules	N/A
Assumptions:	User wants maps for construction site.

Table 68: Show Model (Web).

Use Case ID:	M6-UC2
Use Case Name:	Show Model (Web)
Actors:	Primary Actor: User
Description:	User can see the 3D model.
Trigger:	User clicks on Model
Level:	High
Preconditions:	PRE-1: User has visited the
Includes:	M6-UC1
Normal Flow:	1. User will click on the model 2. User will see the model. 3. User can rotate the model. 4. User will have full three-dimensional experience of model.
Alternative Flows:	N/A
Exceptions:	1. If user does not have internet the model will not be downloaded and user will see error message "Connect to internet to download model first time."
Postconditions:	POST-1. User will have full experience of viewing 3D Object
Business Rules	N/A
Assumptions:	User wants maps for construction site.

Table 69: Show Model (Mobile).

Use Case ID:	M6-UC3
Use Case Name:	Show Model (Model)
Actors:	Primary Actor: User
Description:	User can see the 3D model.
Trigger:	User clicks on Model
Level:	High
Preconditions:	PRE-1: User has visited the
Includes:	M6-UC1
Normal Flow:	5. User will click on the model 6. User will see the model. 7. User can rotate the model. 8. User will have full three-dimensional experience of model.
Alternative Flows:	N/A
Exceptions:	2. If user does not have internet the model will not be downloaded and user will see error message "Connect to internet to download model first time."
Postconditions:	POST-1. User will have full experience of viewing 3D Object
Business Rules	N/A
Assumptions:	User wants maps for construction site.

Table 70: Save Model (Web).

Use Case ID:	M6-UC4
Use Case Name:	Save Model (Web)
Actors:	Primary Actor: User
Description:	User can save the 3D model.
Trigger:	User clicks on 'Save Model' button
Level:	High
Preconditions:	PRE-1: User is in models' menu
Includes:	M1-UC2, M1-UC4, M6-UC1, M6-UC2
Normal Flow:	1. User will click on the model list 2. User will press the save model button
Alternative Flows:	1. User is viewing the model 2. User presses save button
Exceptions:	3. If user does not have enough storage popup message will appear" saving model to library but cannot be downloaded'
Postconditions:	POST-1. User will have full experience of viewing 3D Object POST-2. 3D Model will be saved to user's library
Business Rules	N/A
Assumptions:	User wants maps for construction site.

Table 71: Save Model (Mobile).

Use Case ID:	M6-UC5
Use Case Name:	Save Model (Mobile)
Actors:	Primary Actor: User
Description:	User can save the 3D model.
Trigger:	User clicks on 'Save Model' button
Level:	High
Preconditions:	PRE-1: User is in models' menu
Includes:	M1-UC1, M1-UC3, M6-UC2, M6-UC3
Normal Flow:	1. User will click on the model list 2. User will press the save model button
Alternative Flows:	1. User is viewing the model 2. User presses save button
Exceptions:	1. If user does not have enough storage popup message will appear" saving model to library but cannot be downloaded'
Postconditions:	POST-1. User will have full experience of viewing 3D Object POST-2. 3D Model will be saved to user's library
Business Rules	N/A
Assumptions:	User wants maps for construction site.

Table 72: Share Model (Web).

Use Case ID:	M6-UC6
Use Case Name:	Share Model (Web).
Actors:	Primary Actor: User
Description:	User can share the 3D model.
Trigger:	User clicks on 'Share' button
Level:	High
Preconditions:	PRE-1: User is in models' menu
Includes:	M1-UC1, M1-UC3, M6-UC2, M6-UC3
Normal Flow:	1. User will click on the model list 2. User will press the share model button
Alternative Flows:	1. User is viewing the model 2. User presses share button
Exceptions:	2. If user does not have enough storage popup message will appear" saving model to library but cannot be downloaded'
Postconditions:	POST-1. User will have full experience of viewing 3D Object POST-2. 3D Model will be shared.
Business Rules	N/A
Assumptions:	User wants maps for construction site.

Table 73: Share Model (Mobile).

Use Case ID:	M6-UC7
Use Case Name:	Share Model (Mobile).
Actors:	Primary Actor: User
Description:	User can share the 3D model.
Trigger:	User clicks on 'Share' button
Level:	High
Preconditions:	PRE-1: User is in models' menu
Includes:	M1-UC1, M1-UC3, M6-UC2, M6-UC3
Normal Flow:	3. User will click on the model list 4. User will press the share model button
Alternative Flows:	3. User is viewing the model 4. User presses share button
Exceptions:	3. If user does not have enough storage popup message will appear" saving model to library but cannot be downloaded'
Postconditions:	POST-1. User will have full experience of viewing 3D Object POST-2. 3D Model will be shared.
Business Rules	N/A
Assumptions:	User wants maps for construction site.

4.2.7 Module 7: House Décor (AR)

Following are the Tabular Use Cases for seventh module

Table 74: Show Objects.

Use Case ID:	M7-UC1
Use Case Name:	Show Objects.
Actors:	Primary Actor: User
Description:	User can see the list of possible objects to be placed.
Trigger:	User clicks on 'Objects' button
Level:	High
Preconditions:	PRE-1: User is in Décor menu
Includes:	N/A
Normal Flow:	1. User will click on the AR Menu 2. User will see the list of possible objects
Alternative Flows:	N/A
Exceptions:	1. If user's device does not support AR prompt message will appear "Device not supported"
Postconditions:	POST-1. User will have full experience of AR. POST-2. User will be able to virtually décor house before buying things.
Business Rules	N/A
Assumptions:	User wants to décor house virtually.

Table 75: Select Objects.

Use Case ID:	M7-UC2
Use Case Name:	Select Objects.
Actors:	Primary Actor: User
Description:	User can select the object from list.
Trigger:	User clicks on 'Object'
Level:	High
Preconditions:	PRE-1: User is in Décor menu
Includes:	M7-UC1
Normal Flow:	1. User will click on object 2. Object will be placed to virtual world
Alternative Flows:	N/A
Exceptions:	1. If user's device does not support AR prompt message will appear "Device not supported"
Postconditions:	POST-1. User will have full experience of AR. POST-2. User will be able to virtually décor house before buying things.
Business Rules	N/A
Assumptions:	User wants to décor house virtually.

Table 76: Move Objects.

Use Case ID:	M7-UC3
Use Case Name:	Move Objects.
Actors:	Primary Actor: User
Description:	User can move the object in virtual world.
Trigger:	User drags on screen, User moves phone
Level:	High
Preconditions:	PRE-1: User is in Décor menu
Includes:	M7-UC1, M7-UC2
Normal Flow:	1. User will press and hold the object 2. User will drag the object to move it in the virtual world 3. Moving Phone will also move the object.
Alternative Flows:	N/A
Exceptions:	1. If user's device does not support AR prompt message will appear "Device not supported"
Postconditions:	POST-1. User will have full experience of AR. POST-2. User will be able to virtually décor house before buying things.
Business Rules	N/A
Assumptions:	User wants to décor house virtually.

Table 77: Resize Objects.

Use Case ID:	M7-UC4
Use Case Name:	Resize Objects.
Actors:	Primary Actor: User
Description:	User can change the size of the object in virtual world.
Trigger:	User pinches on the object
Level:	High
Preconditions:	PRE-1: User is in Décor menu
Includes:	M7-UC1, M7-UC2
Normal Flow:	1. User will pinch on the object 2. Object size will increase Moving Phone will also move the object.
Alternative Flows:	N/A
Exceptions:	2. If user's device does not support AR prompt message will appear "Device not supported"
Postconditions:	POST-1. User will have full experience of AR. POST-2. User will be able to virtually décor house before buying things.
Business Rules	N/A
Assumptions:	User wants to décor house virtually.

Use Case ID:	M7-UC5
Use Case Name:	Place Objects.
Actors:	Primary Actor: User
Description:	User can fix the position of the object in virtual world.
Trigger:	User will select 'Place' button
Level:	High
Preconditions:	PRE-1: User is in Décor menu
Includes:	M7-UC1, M7-UC2, M7-UC4
Normal Flow:	1. User will select 'Place' button 2. Object will remain fixed in the virtual world.
Alternative Flows:	N/A
Exceptions:	3. If user's device does not support AR prompt message will appear "Device not supported"
Postconditions:	POST-1. User will have full experience of AR. POST-2. User will be able to virtually décor house before buying things.
Business Rules	N/A
Assumptions:	User wants to décor house virtually.

Table 79: Rotate Objects.

Use Case ID:	M7-UC6
Use Case Name:	Rotate Objects.
Actors:	Primary Actor: User
Description:	User can rotate the object in virtual world.
Trigger:	User presses "rotate" icon on object.
Level:	High
Preconditions:	PRE-1: User is in Décor menu
Includes:	M7-UC1, M7-UC2
Normal Flow:	1. User will press and hold object on virtual world 2. User will press and hold rotate button 3. User will swipe on screen to rotate object. 4. Object will be rotated in the virtual world.
Alternative Flows:	N/A
Exceptions:	1. If user's device does not support AR prompt message will appear "Device not supported"
Postconditions:	POST-1. User will have full experience of AR. POST-2. User will be able to virtually décor house before buying things.
Business Rules	N/A
Assumptions:	User wants to décor house virtually.

Table 80: Remove Objects.

Use Case ID:	M7-UC7
Use Case Name:	Remove Objects.
Actors:	Primary Actor: User
Description:	User can remove the object from virtual world.
Trigger:	User presses "remove" button.
Level:	High
Preconditions:	PRE-1: User is in Décor menu
Includes:	M7-UC1, M7-UC2
Normal Flow:	1. User will press and hold object on virtual world 2. User will press remove button 3. Object will be removed from the virtual world.
Alternative Flows:	N/A
Exceptions:	1. If user's device does not support AR prompt message will appear "Device not supported"
Postconditions:	POST-1. User will have full experience of AR. POST-2. User will be able to virtually décor house before buying things.
Business Rules	N/A
Assumptions:	User wants to décor house virtually.

4.2.8 Module 8: Application Requests

Following are the Tabular Use Cases for eighth module

Table 81: New Application (Web).

Use Case ID:	M8-UC1
Use Case Name:	New Application (Web)
Actors:	Primary Actor: User
Description:	User can send application to government authorities.
Trigger:	User presses "+" button.
Level:	High
Preconditions:	PRE-1: User is logged in PRE-2: User is in Application Menu
Includes:	M1-UC2, M1-UC4,
Normal Flow:	1. User will press '+' button 2. User will be asked to select government body 3. User will be given a form to fill w.r.t to the authority 4. User will attach the required documents in pdf or image format 5. User will press send button
Alternative Flows:	N/A
Exceptions:	1. If user enters invalid CNIC prompt message will appear "Enter Valid CNIC' 2. If user enters invalid Email prompt message will appear "Enter Valid Email' 3. If user enters invalid Phone prompt message will appear "Enter Valid Phone' 4. If user does not attach requirements error message will appear saying "Attach required documents'
Postconditions:	POST-1. User's application will be sent to verification phase. POST-2. User will immediately get response if the application was submitted.
Business Rules	N/A
Assumptions:	User owns the property.

Table 82: New Application (Mobile).

Use Case ID:	M8-UC2
Use Case Name:	New Application (Mobile)
Actors:	Primary Actor: User
Description:	User can send application to government authorities.
Trigger:	User presses "+" button.
Level:	High
Preconditions:	PRE-1: User is logged in PRE-2: User is in Application Menu
Includes:	M1-UC1, M1-UC3
Normal Flow:	1. User will press '+' button 2. User will be asked to select government body 3. User will be given a form to fill w.r.t to the authority 4. User will attach the required documents in pdf or image format 5. User will press send button
Alternative Flows:	N/A
Exceptions:	5. If user enters invalid CNIC prompt message will appear "Enter Valid CNIC' 6. If user enters invalid Email prompt message will appear "Enter Valid Email' 7. If user enters invalid Phone prompt message will appear "Enter Valid Phone' 8. If user does not attach requirements error message will appear saying "Attach required documents'
Postconditions:	POST-1. User's application will be sent to verification phase. POST-2. User will immediately get response if the application was submitted.
Business Rules	N/A
Assumptions:	User owns the property.

Use Case ID:	M8-UC3
Use Case Name:	Verify Application (Web)
Actors:	Primary Actor: SCM
	Secondary Actor: User
Description:	User's application will be verified before sending.
Trigger:	User presses "Send" button.
Level:	High
Preconditions:	PRE-1: User is logged in
	PRE-2: User sent the application
Includes:	M1-UC2, M1-UC4, M8-UC1
Normal Flow:	1. User will press 'Send' button
	2. SCM verifies if there is any other application for same address. One address can have only one application.
	3. SCM verifies if the applications against CNIC are not more than five.
	4. SCM informs user if the application is sent to respective authority or not.
Alternative Flows:	N/A
Exceptions:	1. If a request has been made for same address prompt message will appear "One application request against this address has already been made. Complete previous request to request more.'
	2. If five requests have been made with same CNIC prompt message will appear "this CNIC has already made five requests. Complete previous requests to request more.'
Postconditions:	POST-1. User's application will be sent to government body.
	POST-2. User will immediately get response if the application was submitted.
Business Rules	N/A
Assumptions:	User owns the property.

Table 84: Verify Application (Mobile).

Use Case ID:	M8-UC4
Use Case Name:	Verify Application (Mobile)
Actors:	Primary Actor: SCM
	Secondary Actor: User
Description:	User's application will be verified before sending.
Trigger:	User presses "Send" button.
Level:	High
Preconditions:	PRE-1: User is logged in
	PRE-2: User sent the application
Includes:	M1-UC1, M1-UC3, M8-UC2
Normal Flow:	1. User will press 'Send' button
	2. SCM verifies if there is any other application for same address. One address can have only one application.
	3. SCM verifies if the applications against CNIC are not more than five.
	4. SCM informs user if the application is sent to respective authority or not.
Alternative Flows:	N/A
Exceptions:	3. If a request has been made for same address prompt message will appear "One application request against this address has already been made. Complete previous request to request more.'
	4. If five requests have been made with same CNIC prompt message will appear "this CNIC has already made five requests. Complete previous requests to request more.'
Postconditions:	POST-1. User's application will be sent to government body.
	POST-2. User will immediately get response if the application was submitted.
Business Rules	N/A
Assumptions:	User owns the property.

Table 85: Manage Application (Web).

Use Case ID:	M8-UC5
Use Case Name:	Manage Application (Web)
Actors:	Primary Actor: User
Description:	User will see list of applications.
Trigger:	User presses "Manage Applications" button.
Level:	High
Preconditions:	PRE-1: User is logged in
Includes:	M1-UC2, M1-UC4
Normal Flow:	1. User will press 'Manage Applications' button 2. User will see a list of applications. 3. Applications will be grouped according to their status (Active, Completed, Rejected etc.)
Alternative Flows:	N/A
Exceptions:	1. If user has not made any applications requests "no application requests" will appear instead of the list.
Postconditions:	POST-1. User will be able to see application request history. POST-2. User will be able to manage applications.
Business Rules	N/A
Assumptions:	User owns the property.

Table 86: Manage Application (Mobile).

Use Case ID:	M8-UC6
Use Case Name:	Manage Application (Mobile)
Actors:	Primary Actor: User
Description:	User will see list of applications.
Trigger:	User presses "Manage Applications" button.
Level:	High
Preconditions:	PRE-1: User is logged in
Includes:	M1-UC1, M1-UC3
Normal Flow:	1. User will press 'Manage Applications' button 2. User will see a list of applications. 3. Applications will be grouped according to their status (Active, Completed, Rejected etc.)
Alternative Flows:	N/A
Exceptions:	1. If user has not made any applications requests "no application requests" will appear instead of the list.
Postconditions:	POST-1. User will be able to see application request history. POST-2. User will be able to manage applications.
Business Rules	N/A
Assumptions:	User owns the property.

Table 87: View Application (Web).

Use Case ID:	M8-UC7
Use Case Name:	View Application (Web)
Actors:	Primary Actor: User
Description:	User will see detail of application.
Trigger:	User clicks on applications from list.
Level:	High
Preconditions:	PRE-1: User is logged in PRE-2: User has made application request
Includes:	M1-UC2, M1-UC4, M8-UC1, M8-UC3, M8-UC5
Normal Flow:	1. User will click on application. 2. User will see application detail.
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will be able to see application history. POST-2. User will be able to cancel application. POST-3. User will be able to resubmit application.
Business Rules	N/A
Assumptions:	User owns the property.

Table 88: View Application (Mobile).

Use Case ID:	M8-UC8
Use Case Name:	View Application (Mobile)
Actors:	Primary Actor: User
Description:	User will see detail of application.
Trigger:	User clicks on applications from list.
Level:	High
Preconditions:	PRE-1: User is logged in PRE-2: User has made application request
Includes:	M1-UC1, M1-UC3, M8-UC2, M8-UC4, M8-UC6
Normal Flow:	1. User will click on application. 2. User will see application detail.
Alternative Flows:	N/A
Exceptions:	N/A
Postconditions:	POST-1. User will be able to see application history. POST-2. User will be able to cancel application. POST-3. User will be able to resubmit application.
Business Rules	N/A
Assumptions:	User owns the property.

Table 89: Cancel Application (Web).

Use Case ID:	M8-UC9
Use Case Name:	Cancel Application (Web)
Actors:	Primary Actor: User
Description:	User will be able to cancel application request made
Trigger:	User clicks on 'Cancel' button
Level:	High
Preconditions:	PRE-1: User is logged in PRE-2: User has made application request
Includes:	M1-UC2, M1-UC4, M8-UC1, M8-UC3, M8-UC5, M8-UC7
Normal Flow:	1. User will click on application. 2. User will click 'Cancel Button'
Alternative Flows:	1. User will click on Manage Application. 2. User will press 'x' button on application.
Exceptions:	1. If application is complete 'cancel' button will not appear.
Postconditions:	POST-1. Application will be canceled.
Business Rules	N/A
Assumptions:	User owns the property.

Table 90: Cancel Application (Mobile).

Use Case ID:	M8-UC10
Use Case Name:	Cancel Application (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to cancel application request made
Trigger:	User clicks on 'Cancel' button
Level:	High
Preconditions:	PRE-1: User is logged in PRE-2: User has made application request
Includes:	M1-UC1, M1-UC3, M8-UC2, M8-UC4, M8-UC6, M8-UC8
Normal Flow:	1. User will click on application. 2. User will click 'Cancel Button'
Alternative Flows:	1. User will click on Manage Application. 2. User will press 'x' button on application.
Exceptions:	1. If application is complete 'cancel' button will not appear.
Postconditions:	POST-1. Application will be canceled
Business Rules	N/A
Assumptions:	User owns the property.

Table 91: Receive Update (Web).

Use Case ID:	M8-UC11
Use Case Name:	Receive Update (Web)
Actors:	Primary Actor: SCM Secondary Actor: User
Description:	User will be able to receive application update.
Trigger:	SCM receives response from admin.
Level:	High
Preconditions:	PRE-1: User is logged in PRE-2: User has made application request
Includes:	M1-UC2, M1-UC4, M8-UC1, M8-UC3
Normal Flow:	1. SCM will run background service to receive update from government authorities. 2. SCM will notify user of update. 3. User will click on notification to see the update.
Alternative Flows:	N/A
Exceptions:	1. If user has turned off notification's user will not see notification of update.
Postconditions:	POST-1. User will see updated response.
Business Rules	N/A
Assumptions:	User owns the property.

Table 92: Receive Update (Mobile).

Use Case ID:	M8-UC12
Use Case Name:	Receive Update (Mobile)
Actors:	Primary Actor: SCM Secondary Actor: User
Description:	User will be able to receive application update.
Trigger:	SCM receives response from admin.
Level:	High
Preconditions:	PRE-1: User is logged in PRE-2: User has made application request
Includes:	M1-UC1, M1-UC3, M8-UC2, M8-UC4
Normal Flow:	1. SCM will run background service to receive update from government authorities. 2. SCM will notify user of update. 3. User will click on notification to see the update.
Alternative Flows:	N/A
Exceptions:	1. If user has turned off notification's user will not see notification of update.
Postconditions:	POST-1. User will see updated response.
Business Rules	N/A
Assumptions:	User owns the property.

Table 93: Re-submit (Web).

Use Case ID:	M8-UC13
Use Case Name:	Re-submit (Web)
Actors:	Primary Actor: User
Description:	User will be able to resubmit application.
Trigger:	User clicks RI-submit' button
Level:	High
Preconditions:	PRE-1: User is logged in PRE-2: User has made application request
Includes:	M1-UC2, M1-UC4, M8-UC1, M8-UC3, M8-UC5, M8-UC7, M8-UC11
Normal Flow:	1. User clicks on Re-submit button 2. User fix the application form as per admin requirement. 3. User press submit button.
Alternative Flows:	N/A
Exceptions:	1. If user enters invalid CNIC prompt message will appear "Enter Valid CNIC' 2. If user enters invalid Email prompt message will appear "Enter Valid Email' 3. If user enters invalid Phone prompt message will appear "Enter Valid Phone' 4. If user does not attach requirements error message will appear saying "Attach required documents'
Postconditions:	POST-1. User will send updated application.
Business Rules	N/A
Assumptions:	User owns the property.

Table 94: Re-submit (Mobile).

Use Case ID:	M8-UC14
Use Case Name:	Re-submit (Mobile)
Actors:	Primary Actor: User
Description:	User will be able to resubmit application.
Trigger:	User clicks 'Re-submit' button
Level:	High
Preconditions:	PRE-1: User is logged in PRE-2: User has made application request
Includes:	M1-UC2, M1-UC4, M8-UC1, M8-UC3, M8-UC5, M8-UC7, M8-UC11
Normal Flow:	1. User clicks on Re-submit button 2. User fix the application form as per admin requirement. 3. User press submit button.
Alternative Flows:	N/A
Exceptions:	1. If user enters invalid CNIC prompt message will appear "Enter Valid CNIC' 2. If user enters invalid Email prompt message will appear "Enter Valid Email' 3. If user enters invalid Phone prompt message will appear "Enter Valid Phone' 4. If user does not attach requirements error message will appear saying "Attach required documents'
Postconditions:	POST-1. User will send updated application.
Business Rules	N/A
Assumptions:	User owns the property.

4.2.9 Module 9: Requests Management

Following are the tabular use cases for module 9 requests management

Table 95: Create Admin Account.

Use Case ID:	M9-UC1
Use Case Name:	Create Admin Account
Actors:	Primary Actor: SCM Secondary Actor: Admin
Description:	SCM will provide Admin account for managing employees in department
Trigger:	System is deployed
Level:	High
Preconditions:	N/A
Includes:	N/A
Normal Flow:	1. SCM will provide an admin account to manage organization 2. Account will have a default username and password
Alternative Flows:	N/A
Exceptions:	1. If admin enters invalid username prompt message will appear "Enter Valid Username' 2. If user enters invalid password prompt message will appear "Enter Valid Password'
Postconditions:	POST-1. Admin will be able to login with provided email and password for first time.
Business Rules	N/A
Assumptions:	Admin knows default username and password

Table 96: First Login.

Use Case ID:	M9-UC2
Use Case Name:	First Login
Actors:	Primary Actor: Admin, Employee
Description:	Actor will login with default username and password and change
Trigger:	Actor presses "login" button.
Level:	High
Preconditions:	PRE-1: Actor has visited the portal
Includes:	M9-UC1
Normal Flow:	1. Actor Enters default username and password. 2. Actor sets new password. 3. Actor confirms new password. 4. Actor presses save changes.
Alternative Flows:	N/A
Exceptions:	1. If Actor enters invalid username prompt message will appear "Enter Valid Username' 2. If Actor enters invalid password prompt message will appear "Enter Valid Password' 3. If password does not match the password requirement prompt message will appear "Password must have 8 characters including digits, alphabets and special character"
Postconditions:	POST-1. Admin will be able to login with new password.
Business Rules	N/A
Assumptions:	Actors know the username and password.

Use Case ID:	M9-UC3
Use Case Name:	Login
Actors:	Primary Actor: Admin, Employee
Description:	Actor will be able to login.
Trigger:	Actor presses "login" button.
Level:	High
Preconditions:	PRE-1: Actor has visited the portal PRE-2: Actor has logged in before
Includes:	M9-UC1, M9-UC2
Normal Flow:	1. Actor enters username. 2. Actor enters password. 3. Actor presses log in.
Alternative Flows:	N/A
Exceptions:	1. If Actor enters invalid username prompt message will appear "Enter Valid Username' 2. If Actor enters invalid password prompt message will appear "Enter Valid Password'
Postconditions:	POST-1. Admin will be able to manage employee. POST-2. Employee will be able to manage requests.
Business Rules	N/A
Assumptions:	Actors know the username and password.

Table 98: Forget Password.

Use Case ID:	M9-UC4
Use Case Name:	Forget Password
Actors:	Primary Actor: Admin, Employee
Description:	Actor will be able reset password.
Trigger:	Actor presses "Forget Password" button.
Level:	High
Preconditions:	PRE-1: Actor has visited the portal PRE-2: Actor has logged in before
Includes:	M9-UC1, M9-UC2
Normal Flow:	1. Actor presses Forget Password. 2. Actor enters OTP received on email. 3. Actor enters new password. 4. Actor confirms new password. 5. Actor presses save changes
Alternative Flows:	N/A
Exceptions:	1. If Actor enters invalid email prompt message will appear "Enter Valid Email" 2. If Actor enters invalid OTP prompt message will appear "Enter Valid OTP" 3. If password does not match the password requirement prompt message will appear "Password must have 8 characters including digits, alphabets and special character"
Postconditions:	POST-1. Actor will be able to login with new password.
Business Rules	N/A
Assumptions:	Actors has the working email

Table 99: Update Profile.

Use Case ID:	M9-UC5
Use Case Name:	Update Profile
Actors:	Primary Actor: Admin, Employee
Description:	Actor will be able to update profile.
Trigger:	Actor presses "Update Profile" button.
Level:	High
Preconditions:	PRE-1: Actor has visited the portal PRE-2: Actor has logged in before
Includes:	M9-UC1, M9-UC2
Normal Flow:	1. Actor presses Update Profile. 2. Actor changed the information they want to change. 3. Actor presses save changes
Alternative Flows:	N/A
Exceptions:	1. If Actor enters invalid email prompt message will appear "Enter Valid Email" 2. If password does not match the password requirement prompt message will appear "Password must have 8 characters including digits, alphabets and special character"
Postconditions:	POST-1. Actor will be able to Update Profile.
Business Rules	N/A
Assumptions:	Actors has logged in.

Table 100: Add Employee.

Use Case ID:	M9-UC6
Use Case Name:	Add Employee
Actors:	Primary Actor: Admin
Description:	Admin will be click on Add Employee to add employee.
Trigger:	Admin presses "Add Employee" button.
Level:	High
Preconditions:	PRE-1: Admin has visited the portal PRE-2: Admin has logged in before
Includes:	M9-UC1, M9-UC2
Normal Flow:	1. Admin presses Manage Employee. 2. Admin will see List of Employee 3. Admin selects Add Employee 4. Admin enters employee's email 5. Admin selects employee role 6. Admin presses submit to add employee
Alternative Flows:	N/A
Exceptions:	1. If Employees are not added "No Employee Added" will be seen instead of the list
Postconditions:	POST-1. Employee will be able to login with username provided and default password
Business Rules	N/A
Assumptions:	Actors knows his employees.

Table 101: Employee Role.

Use Case ID:	M9-UC7
Use Case Name:	Employee Role
Actors:	Primary Actor: Admin
Description:	Admin will be click on Manage Employee.
Trigger:	Admin changes role from dropdown.
Level:	High
Preconditions:	PRE-1: Admin has visited the portal PRE-2: Admin has logged in before PER-3: Admin has created employee account.
Includes:	M9-UC1, M9-UC2, M9-UC6
Normal Flow:	1. Admin presses Manage Employee. 2. Admin will see List of Employee 3. Admin will change Employee role from dropdown
Alternative Flows:	N/A
Exceptions:	2. If Employees are not added "No Employee Added" will be seen instead of the list
Postconditions:	POST-1. Admin will be able to manage employee.
Business Rules	N/A
Assumptions:	Actors knows his employees.

Table 102: Remove Employee.

Use Case ID:	M9-UC8
Use Case Name:	Remove Employee
Actors:	Primary Actor: Admin
Description:	Admin will click on Manage Employee to Remove Employee.
Trigger:	Admin will be pressing 'x' button
Level:	High
Preconditions:	PRE-1: Admin has visited the portal PRE-2: Admin has logged in before PER-3: Admin has created employee account.
Includes:	M9-UC1, M9-UC2, M9-UC6
Normal Flow:	1. Admin presses Manage Employee. 2. Admin will see List of Employee 3. Admin will press 'x' button.
Alternative Flows:	N/A
Exceptions:	3. If Employees are not added "No Employee Added" will be seen instead of the list
Postconditions:	POST-1. Admin will be able to manage employee.
Business Rules	N/A
Assumptions:	Actors knows his employees.

Table 103: View Request.

Use Case ID:	M9-UC9
Use Case Name:	View Request
Actors:	Primary Actor: Employee
Description:	Employee will see the requests details.
Trigger:	Employee will press request from the list.
Level:	High
Preconditions:	PRE-1: Employee has visited the portal PRE-2: Employee has logged in before PER-3: User has sent request.
Includes:	M9-UC2, M9-UC3
Normal Flow:	1. Employee presses Manage Requests. 2. Employee will see List of Requests. 3. Employee clicks on request.
Alternative Flows:	N/A
Exceptions:	4. If Requests are not received "No Requests" will be seen instead of the requests list
Postconditions:	POST-1. Employee will be able to see the request detail.
Business Rules	N/A
Assumptions:	Actors knows his employees.

Table 104: Download/View Attachments.

Use Case ID:	M9-UC10
Use Case Name:	Download/View Attachments
Actors:	Primary Actor: Employee
Description:	Employee will be able to Download/View Attachments sent by user with request.
Trigger:	Employee 'Download/View Attachments' button.
Level:	High
Preconditions:	PRE-1: Employee has visited the portal PRE-2: Employee has logged in before PER-3: User has sent request.
Includes:	M9-UC2, M9-UC3
Normal Flow:	1. Employee presses Download/View Attachments. 2. Attachments Open 3. Employee presses download button. 4. Employee selects download location. 5. Employee clicks save to save attachments.
Alternative Flows:	N/A
Exceptions:	1. If Requests are not received "No Requests" will be seen instead of the requests list
Postconditions:	POST-1. Request verification process will start.
Business Rules	N/A
Assumptions:	Actors knows his employees.

Table 105: Update Request.

Use Case ID:	M9-UC11
Use Case Name:	Update Request
Actors:	Primary Actor: Employee
Description:	Employee will send user the update on requests.
Trigger:	Employee 'Send Update' button.
Level:	High
Preconditions:	PRE-1: Employee has visited the portal PRE-2: Employee has logged in before PER-3: User has sent request.
Includes:	M9-UC2, M9-UC3
Normal Flow:	6. Employee changes request status. 7. Employee types update message. 8. Employee clicks on send update.
Alternative Flows:	N/A
Exceptions:	2. If Requests are not received "No Requests" will be seen instead of the requests list
Postconditions:	POST-1. Request update will be sent to user.
Business Rules	N/A
Assumptions:	Actors knows his employees.

Table 106: Terminate Request.

Use Case ID:	M9-UC12
Use Case Name:	Terminate Request
Actors:	Primary Actor: Employee
Description:	Employee will terminate the requests.
Trigger:	Employee 'Terminate Request' button.
Level:	High
Preconditions:	PRE-1: Employee has visited the portal PRE-2: Employee has logged in before PER-3: User has sent request.
Includes:	M9-UC2, M9-UC3
Normal Flow:	1. Employee changes status (Accepted/Rejected). 2. Employee terminates request. 3. Employee clicks on send update.
Alternative Flows:	N/A
Exceptions:	1. If Requests are not received "No Requests" will be seen instead of the requests list
Postconditions:	POST-1. Request update will be sent to user.
Business Rules	N/A
Assumptions:	Actors knows his employees.

5. Functional Requirements

M1-UC1: Description of FR-1.1.1

Identifier	FR-1.1.1
Title	Enter Email
Requirement	The user will enter his email in the given input field.
Source	Student
Rationale	Email is required to register the user.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M1-UC1: Description of FR-1.1.2

Identifier	FR-1.1.2
Title	Enter Password
Requirement	The user will enter his password in the given input field.
Source	Student
Rationale	Password is required to register the user.
Business Rule (if required)	N/A
Dependencies	FR-1.1.1
Priority	High

M1-UC1: Description of FR-1.1.3

Identifier	FR-1.1.3
Title	Send OTP
Requirement	OTP will be sent on user's email.
Source	Student
Rationale	OTP is required to verify working email.
Business Rule (if required)	N/A
Dependencies	FR-1.1.1, FR-1.1.2
Priority	High

M1-UC1: Description of FR-1.1.4

Identifier	FR-1.1.4
Title	Enter OTP
Requirement	The user will enter OTP in given input field.
Source	Student
Rationale	OTP is required to register the user.
Business Rule (if required)	N/A
Dependencies	FR-1.1.1, FR-1.1.2, FR-1.1.3
Priority	High

M1-UC1: Description of FR-1.1.5

Identifier	FR-1.1.5
Title	Enter Profile Info
Requirement	The user will enter his name in the given input field.
Source	Student
Rationale	Name is required to register the user.
Business Rule (if required)	N/A
Dependencies	FR-1.1.1, FR-1.1.2, FR-1.1.3, FR-1.1.4
Priority	High

M1-UC2: Description of FR-1.2.1

Identifier	FR-1.2.1
Title	Enter Email
Requirement	The user will enter his email in the given input field.
Source	Student
Rationale	Email is required to register the user.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M1-UC2: Description of FR-1.2.2

Identifier	FR-1.2.2
Title	Enter Password
Requirement	The user will enter his password in the given input field.
Source	Student
Rationale	Password is required to register the user.
Business Rule (if required)	N/A
Dependencies	FR-1.2.1
Priority	High

M1-UC2: Description of FR-1.2.3

Identifier	FR-1.2.3
Title	Send OTP
Requirement	OTP will be sent on user's email.
Source	Student
Rationale	OTP is required to verify working email.
Business Rule (if required)	N/A
Dependencies	FR-1.2.1, FR-1.2.2
Priority	High

M1-UC2: Description of FR-1.2.4

Identifier	FR-1.2.4
Title	Enter OTP
Requirement	The user will enter OTP in given input field.
Source	Student
Rationale	OTP is required to register the user.
Business Rule (if required)	N/A
Dependencies	FR-1.2.1, FR-1.2.2, FR-1.2.3
Priority	High

M1-UC2: Description of FR-1.2.5

Identifier	FR-1.2.5
Title	Enter Profile Info
Requirement	The user will enter his name in the given input field.
Source	Student
Rationale	Name is required to register the user.
Business Rule (if required)	N/A
Dependencies	FR-1.2.1, FR-1.2.2, FR-1.2.3, FR-1.2.4
Priority	High

M1-UC3: Description of FR-1.3.1

Identifier	FR-1.3.1
Title	Enter Email
Requirement	The user will enter his email in the given input field.
Source	Student
Rationale	Email is required to login the user.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M1-UC3: Description of FR-1.3.2

Identifier	FR-1.3.2
Title	Enter Password
Requirement	The user will enter his password in the given input field.
Source	Student
Rationale	Password is required to login the user.
Business Rule (if required)	N/A
Dependencies	FR-1.3.2
Priority	High

M1-UC4: Description of FR-1.4.1

Identifier	FR-1.4.1
Title	Enter Email
Requirement	The user will enter his email in the given input field.
Source	Student
Rationale	Email is required to login the user.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M1-UC4: Description of FR-1.4.2

Identifier	FR-1.4.2
Title	Enter Password
Requirement	The user will enter his password in the given input field.
Source	Student
Rationale	Password is required to login the user.
Business Rule (if required)	N/A
Dependencies	FR-1.4.1
Priority	High

M1-UC5: Description of FR-1.5.1

Identifier	FR-1.5.1
Title	Enter Email
Requirement	The user will enter his email in the given input field.
Source	Student
Rationale	Email is required to reset user password.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M1-UC5: Description of FR-1.5.2

Identifier	FR-1.5.2
Title	Send OTP
Requirement	OTP will be sent on user's email.
Source	Student
Rationale	OTP is required to verify email.
Business Rule (if required)	N/A
Dependencies	FR-1.5.1
Priority	High

M1-UC5: Description of FR-1.5.3

Identifier	FR-1.5.3
Title	Enter OTP
Requirement	The user will enter OTP in given input field.
Source	Student
Rationale	OTP is required to register the user.
Business Rule (if required)	N/A
Dependencies	FR-1.5.1, FR-1.5.2
Priority	High

M1-UC5: Description of FR-1.5.4

Identifier	FR-1.5.4
Title	Enter New Password
Requirement	The user will enter his new password in the given input field.
Source	Student
Rationale	Password is required to login next time.
Business Rule (if required)	N/A
Dependencies	FR-1.5.1, FR-1.5.2, FR-1.5.3
Priority	High

M1-UC5: Description of FR-1.5.5

Identifier	FR-1.5.5
Title	Confirm New Password
Requirement	The user will enter his new password again in the given input field.
Source	Student
Rationale	Password is required to login next time.
Business Rule (if required)	N/A
Dependencies	FR-1.5.1, FR-1.5.2, FR-1.5.3, FR-1.5.4
Priority	High

M1-UC6: Description of FR-1.6.1

Identifier	FR-1.6.1
Title	Enter Email
Requirement	The user will enter his email in the given input field.
Source	Student
Rationale	Email is required to reset user password.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M1-UC6: Description of FR-1.6.2

Identifier	FR-1.6.2
Title	Send OTP
Requirement	OTP will be sent on user's email.
Source	Student
Rationale	OTP is required to verify email.
Business Rule (if required)	FR-1.6.1
Dependencies	N/A
Priority	High

M1-UC6: Description of FR-1.6.3

Identifier	FR-1.6.3
Title	Enter OTP
Requirement	The user will enter OTP in given input field.
Source	Student
Rationale	OTP is required to register the user.
Business Rule (if required)	N/A
Dependencies	FR-1.6.1, FR-1.6.2
Priority	High

M1-UC6: Description of FR-1.6.4

Identifier	FR-1.6.4
Title	Enter New Password
Requirement	The user will enter his new password in the given input field.
Source	Student
Rationale	Password is required to login next time.
Business Rule (if required)	N/A
Dependencies	FR-1.6.1, FR-1.6.2, FR-1.6.3
Priority	High

M1-UC6: Description of FR-1.6.5

Identifier	FR-1.6.5
Title	Confirm New Password
Requirement	The user will enter his new password again in the given input field.
Source	Student
Rationale	Password is required to login next time.
Business Rule (if required)	N/A
Dependencies	FR-1.6.1, FR-1.6.2, FR-1.6.3, FR-1.6.4
Priority	High

M1-UC7: Description of FR-1.7.1

Identifier	FR-1.7.1
Title	Update Profile
Requirement	The user will enter his new information in the given input fields. And press submit
Source	Student
Rationale	New Information is required to change profile.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M1-UC8: Description of FR-1.8.1

Identifier	FR-1.8.1
Title	Update Profile
Requirement	The user will enter his new information in the given input fields. And press submit
Source	Student
Rationale	New Information is required to change profile.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M1-UC9: Description of FR-1.9.1

Identifier	FR-1.9.1
Title	Profile Privacy
Requirement	The user will select privacy for all profile info from drop down provided.
Source	Student
Rationale	Profile privacy decides what information will be visible to public.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M1-UC9: Description of FR-1.9.2

Identifier	FR-1.9.2
Title	Email Privacy
Requirement	The user will select privacy for email from drop down provided.
Source	Student
Rationale	Email privacy decides whether it will be visible to public.
Business Rule (if required)	N/A
Dependencies	FR-1.9.1
Priority	Medium

M1-UC9: Description of FR-1.9.3

Identifier	FR-1.9.3
Title	Phone Privacy
Requirement	The user will select privacy for phone from drop down provided.
Source	Student
Rationale	Phone privacy decides whether it will be visible to public.
Business Rule (if required)	N/A
Dependencies	FR-1.9.1, FR-1.9.2
Priority	Medium

M1-UC9: Description of FR-1.9.4

Identifier	FR-1.9.4
Title	Picture Privacy
Requirement	The user will select privacy for picture from drop down provided.
Source	Student
Rationale	Picture privacy decides whether it will be visible to public.
Business Rule (if required)	N/A
Dependencies	FR-1.9.1, FR-1.9.2, FR-1.9.3
Priority	Medium

M1-UC10: Description of FR-1.10.1

Identifier	FR-1.10.1
Title	Profile Privacy
Requirement	The user will select privacy for all profile info from drop down provided.
Source	Student
Rationale	Profile privacy decides what information will be visible to public.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M1-UC10: Description of FR-1.10.2

Identifier	FR-1.10.2
Title	Email Privacy
Requirement	The user will select privacy for email from drop down provided.
Source	Student
Rationale	Email privacy decides whether it will be visible to public.
Business Rule (if required)	N/A
Dependencies	FR-1.10.1
Priority	Medium

M1-UC10: Description of FR-1.10.3

Identifier	FR-1.10.3
Title	Phone Privacy
Requirement	The user will select privacy for phone from drop down provided.
Source	Student
Rationale	Phone privacy decides whether it will be visible to public.
Business Rule (if required)	N/A
Dependencies	FR-1.10.1, FR-1.10.2
Priority	Medium

M1-UC10: Description of FR-1.10.4

Identifier	FR-1.10.4
Title	Picture Privacy
Requirement	The user will select privacy for picture from drop down provided.
Source	Student
Rationale	Picture privacy decides whether it will be visible to public.
Business Rule (if required)	N/A
Dependencies	FR-1.10.1, FR-1.10.2, FR-1.10.3
Priority	Medium

M1-UC11: Description of FR-1.11.1

Identifier	FR-1.11.1
Title	Help
Requirement	The user will select help & support.
Source	Student
Rationale	Help & Support page will help user.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Low

M1-UC11: Description of FR-1.11.2

Identifier	FR-1.11.2
Title	Account Help
Requirement	The user will select Account help from help & support page.
Source	Student
Rationale	Account Help will help user in account related matters.
Business Rule (if required)	N/A
Dependencies	FR-1.11.1
Priority	Low

M1-UC11: Description of FR-1.11.3

Identifier	FR-1.11.3
Title	Application Help
Requirement	The user will select Application help from help & support page.
Source	Student
Rationale	Application Help will help user in app usage.
Business Rule (if required)	N/A
Dependencies	FR-1.11.1, FR-1.11.2
Priority	Low

M1-UC12: Description of FR-1.12.1

Identifier	FR-1.12.1
Title	Remove Account
Requirement	The user will select Remove Account button to remove account.
Source	Student
Rationale	Remove account provides user impurity that their data is no more with us as they have decided to leave our app.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Low

M1-UC12: Description of FR-1.12.2

Identifier	FR-1.12.2
Title	Enter OTP
Requirement	The user will enter OTP received via email in provided text field.
Source	Student
Rationale	The OTP adds the security layer to ensure user trying to remove account is same as the one creating it.
Business Rule (if required)	N/A
Dependencies	FR-1.12.1
Priority	High

M1-UC12: Description of FR-1.12.3

Identifier	FR-1.12.3
Title	Enter Password
Requirement	The user will enter Password in provided text field.
Source	Student
Rationale	The Password adds the security layer to ensure user trying to remove account is same as the one creating it.
Business Rule (if required)	N/A
Dependencies	FR-1.12.1, FR-1.12.2
Priority	High

M1-UC13: Description of FR-1.13.1

Identifier	FR-1.13.1
Title	Remove Account
Requirement	The user will select Remove Account button to remove account.
Source	Student
Rationale	Remove account provides user impurity that their data is no more with us as they have decided to leave our app.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Low

M1-UC13: Description of FR-1.13.2

Identifier	FR-1.13.2
Title	Enter OTP
Requirement	The user will enter OTP received via email in provided text field.
Source	Student
Rationale	The OTP adds the security layer to ensure user trying to remove account is same as the one creating it.
Business Rule (if required)	N/A
Dependencies	FR-1.13.1
Priority	High

M1-UC13: Description of FR-1.13.3

Identifier	FR-1.13.3
Title	Enter Password
Requirement	The user will enter Password in provided text field.
Source	Student
Rationale	The Password adds the security layer to ensure user trying to remove account is same as the one creating it.
Business Rule (if required)	N/A
Dependencies	FR-1.13.1, FR-1.13.2
Priority	High

M1-UC14: Description of FR-1.14.1

Identifier	FR-1.14.1
Title	Settings
Requirement	The user will select Settings button from side menu.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M1-UC14: Description of FR-1.14.2

Identifier	FR-1.14.2
Title	Change Location
Requirement	The user will Enter new location in text field.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	FR-1.14.1
Priority	Medium

M1-UC14: Description of FR-1.14.3

Identifier	FR-1.14.3
Title	Current Location
Requirement	The user will select current location button.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	FR-1.14.1
Priority	Medium

M1-UC14: Description of FR-1.14.4

Identifier	FR-1.14.4
Title	Change Theme
Requirement	The user will select theme option from dropdown.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	FR-1.14.1
Priority	Medium

M1-UC14: Description of FR-1.14.5

Identifier	FR-1.14.5
Title	Logout
Requirement	The user account will be logged out.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	FR-1.14.1
Priority	Medium

M1-UC15: Description of FR-1.15.1

Identifier	FR-1.15.1
Title	Settings
Requirement	The user will select Settings button from side menu.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M1-UC15: Description of FR-1.15.2

Identifier	FR-1.15.2
Title	Change Location
Requirement	The user will Enter new location in text field.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	FR-1.15.1
Priority	Medium

M1-UC15: Description of FR-1.15.3

Identifier	FR-1.15.3
Title	Current Location
Requirement	The user will select current location button.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	FR-1.15.1
Priority	Medium

M1-UC15: Description of FR-1.15.4

Identifier	FR-1.15.4
Title	Change Theme
Requirement	The user will select theme option from dropdown.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	FR-1.15.1
Priority	Medium

M1-UC15: Description of FR-1.15.5

Identifier	FR-1.15.5
Title	Logout
Requirement	The user account will be logged out.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	FR-1.15.1
Priority	Medium

M1-UC16: Description of FR-1.16.1

Identifier	FR-1.16.1
Title	Notifications
Requirement	The user will toggle all notifications as on or off.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M1-UC16: Description of FR-1.16.2

Identifier	FR-1.16.2
Title	Message Notifications
Requirement	The user will toggle messaging notifications as on or off.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M1-UC16: Description of FR-1.16.3

Identifier	FR-1.16.3
Title	Ads Notifications
Requirement	The user will toggle Ads notifications as on or off.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M1-UC17: Description of FR-1.17.1

Identifier	FR-1.17.1
Title	Notifications
Requirement	The user will toggle all notifications as on or off.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M1-UC17: Description of FR-1.17.2

Identifier	FR-1.17.2
Title	Message Notifications
Requirement	The user will toggle messaging notifications as on or off.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M1-UC17: Description of FR-1.17.3

Identifier	FR-1.17.3
Title	Ads Notifications
Requirement	The user will toggle Ads notifications as on or off.
Source	Student
Rationale	User will have the functionality to change application settings to match user's needs.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M1-UC18: Description of FR-1.18.1

Identifier	FR-1.18.1
Title	Subscribe
Requirement	The user will subscribe to Newsletter.
Source	Student
Rationale	User will receive latest updates on SCM.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	Medium

M2-UC1: Description of FR-2.1.1

Identifier	FR-2.1.1
Title	Post Add
Requirement	Click on the post add button.
Source	Student
Rationale	This requirement is necessary to post an add.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC1: Description of FR-2.1.2

Identifier	FR-2.1.2
Title	Select Add Category
Requirement	Click on the category dropdown.
Source	Student
Rationale	This requirement is necessary to post an add.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC1: Description of FR-2.1.3

Identifier	FR-2.1.3
Title	Enter Add Description
Requirement	Enter details about add in Textbox.
Source	Student
Rationale	This requirement is necessary to post an add.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC1: Description of FR-2.1.4

Identifier	FR-2.1.4
Title	Enter Price
Requirement	Enter price in text field.
Source	Student
Rationale	This requirement is necessary to post an add.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC1: Description of FR-2.1.5

Identifier	FR-2.1.5
Title	Enter Location
Requirement	Enter location where you add is located in location field.
Source	Student
Rationale	This requirement is necessary to post an add.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC1: Description of FR-2.1.6

Identifier	FR-1.3.6
Title	Click Post Button
Requirement	Press Post Button to post the final add.
Source	Student
Rationale	This requirement is necessary to post an add.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC2: Description of FR-2.2.1

Identifier	FR-2.2.1
Title	Post Add
Requirement	Click on the post add button.
Source	Student
Rationale	This requirement is necessary to post an add.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC2: Description of FR-2.2.2

Identifier	FR-2.2.2
Title	Select Add Category
Requirement	Click on the category dropdown.
Source	Student
Rationale	This requirement is necessary to post an add.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC2: Description of FR-2.2.3

Identifier	FR-2.2.3
Title	Enter Add Description
Requirement	Enter details about add in Textbox.
Source	Student
Rationale	This requirement is necessary to post an add.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC2: Description of FR-2.2.4

Identifier	FR-2.2.4
Title	Enter Price
Requirement	Enter price in text field.
Source	Student
Rationale	This requirement is necessary to post an add.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC2: Description of FR-2.2.5

Identifier	FR-2.2.5
Title	Enter Location
Requirement	Enter location where you add is located in location field.
Source	Student
Rationale	This requirement is necessary to post an add.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC2: Description of FR-2.2.6

Identifier	FR-1.2.6
Title	Click Post Button
Requirement	Press Post Button to post the final add.
Source	Student
Rationale	This requirement is necessary to post an add.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC3: Description of FR-2.3.1

Identifier	FR-2.3.1
Title	Edit Add
Requirement	User will change the fields to be updated.
Source	Student
Rationale	This requirement is there to provide user functionality to manage ads.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC4: Description of FR-2.4.1

Identifier	FR-2.4.1
Title	Edit Add
Requirement	User will change the fields to be updated.
Source	Student
Rationale	This requirement is there to provide user functionality to manage ads.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC5: Description of FR-2.5.1

Identifier	FR-2.5.1
Title	Delete Add
Requirement	User will press delete button in the ads list.
Source	Student
Rationale	This requirement is there to provide user functionality to manage ads.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC6: Description of FR-2.6.1

Identifier	FR-2.5.1
Title	Delete Add
Requirement	User will press delete button in the ads list.
Source	Student
Rationale	This requirement is there to provide user functionality to manage ads.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC7: Description of FR-2.7.1

Identifier	FR-2.7.1
Title	View Add
Requirement	User can view add details by clicking add short description box.
Source	Student
Rationale	This requirement is there to provide user the detailed information of ad.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC7: Description of FR-2.7.2

Identifier	FR-2.7.2
Title	Close Add
Requirement	User can close add details by clicking cross button or back button.
Source	Student
Rationale	This requirement is there to provide user ease in navigation.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC8: Description of FR-2.8.1

Identifier	FR-2.8.1
Title	View Add
Requirement	User can view add details by clicking add short description box.
Source	Student
Rationale	This requirement is there to provide user the detailed information of ad.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC7: Description of FR-2.8.2

Identifier	FR-2.8.2
Title	Close Add
Requirement	User can close add details by clicking cross button or back button.
Source	Student
Rationale	This requirement is there to provide user ease in navigation.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC9: Description of FR-2.9.1

Identifier	FR-2.9.1
Title	History
Requirement	User can see ads history in list by clicking history.
Source	Student
Rationale	This requirement is there to provide user ease in searching history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC9: Description of FR-2.9.2

Identifier	FR-2.9.2
Title	Clear All
Requirement	User can clear ads history in list by clicking clear all.
Source	Student
Rationale	This requirement is there to provide user ease in managing history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC9: Description of FR-2.9.3

Identifier	FR-2.9.3
Title	Remove
Requirement	User can remove specific ad from history.
Source	Student
Rationale	This requirement is there to provide user ease in managing history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC9: Description of FR-2.9.4

Identifier	FR-2.9.4
Title	Toggle History
Requirement	User can see toggle between saving or not saving ads history.
Source	Student
Rationale	This requirement is there to provide user ease in searching history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC10: Description of FR-2.10.1

Identifier	FR-2.10.1
Title	History
Requirement	User can see ads history in list by clicking history.
Source	Student
Rationale	This requirement is there to provide user ease in searching history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC10: Description of FR-2.10.2

Identifier	FR-2.10.2
Title	Clear All
Requirement	User can clear ads history in list by clicking clear all.
Source	Student
Rationale	This requirement is there to provide user ease in managing history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC10: Description of FR-2.10.3

Identifier	FR-2.10.3
Title	Remove
Requirement	User can remove specific ad from history.
Source	Student
Rationale	This requirement is there to provide user ease in managing history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC10: Description of FR-2.10.4

Identifier	FR-2.10.4
Title	Toggle History
Requirement	User can see toggle between saving or not saving ads history.
Source	Student
Rationale	This requirement is there to provide user ease in searching history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC11: Description of FR-2.11.1

Identifier	FR-2.11.1
Title	Favorite Add
Requirement	User will click heart icon to favorite an add.
Source	Student
Rationale	This requirement is there to provide user ease in saving ads.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC11: Description of FR-2.11.2

Identifier	FR-2.11.2
Title	Favorites
Requirement	User can see ads favorited in list by clicking favorites.
Source	Student
Rationale	This requirement is there to provide user ease in searching history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC11: Description of FR-2.11.3

Identifier	FR-2.11.3
Title	Clear All
Requirement	User can clear favorite ads in list by clicking clear all.
Source	Student
Rationale	This requirement is there to provide user ease in managing history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC11: Description of FR-2.11.4

Identifier	FR-2.11.4
Title	Remove
Requirement	User can remove specific ad from favorites.
Source	Student
Rationale	This requirement is there to provide user ease in managing history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC12: Description of FR-2.12.1

Identifier	FR-2.12.1
Title	Favorite Add
Requirement	User will click heart icon to favorite an add.
Source	Student
Rationale	This requirement is there to provide user ease in saving ads.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC12: Description of FR-2.12.2

Identifier	FR-2.12.2
Title	Favorites
Requirement	User can see ads favorited in list by clicking favorites.
Source	Student
Rationale	This requirement is there to provide user ease in searching history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC12: Description of FR-2.12.3

Identifier	FR-2.12.3
Title	Clear All
Requirement	User can clear favorite ads in list by clicking clear all.
Source	Student
Rationale	This requirement is there to provide user ease in managing history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M2-UC12: Description of FR-2.11.4

Identifier	FR-2.12.4
Title	Remove
Requirement	User can remove specific ad from favorites.
Source	Student
Rationale	This requirement is there to provide user ease in managing history.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC1: Description of FR-3.1.1

Identifier	FR-3.1.1
Title	Search Bar
Requirement	User will click on search bar to start searching.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC1: Description of FR-3.1.2

Identifier	FR-3.1.2
Title	Text Field
Requirement	User will enter query in text field on search bar to start searching.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	FR-3.1.1
Priority	High

M3-UC2: Description of FR-3.2.1

Identifier	FR-3.2.1
Title	Search Bar
Requirement	User will click on search bar to start searching.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC2: Description of FR-3.2.2

Identifier	FR-3.2.2
Title	Text Field
Requirement	User will enter query in text field on search bar to start searching.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	FR-3.3.1
Priority	High

M3-UC3: Description of FR-3.3.1

Identifier	FR-3.3.1
Title	Search Bar Icon
Requirement	User will click audio icon on search bar and start speaking.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC3: Description of FR-3.3.2

Identifier	FR-3.3.2
Title	Text Field
Requirement	User's speech will be converted to text and will be shown on search bar.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	FR-3.3.1
Priority	High

M3-UC4: Description of FR-3.4.1

Identifier	FR-3.4.1
Title	Search Bar Icon
Requirement	User will click audio icon on search bar and start speaking.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC4: Description of FR-3.4.2

Identifier	FR-3.4.2
Title	Text Field
Requirement	User's speech will be converted to text and will be shown on search bar.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	FR-3.4.1
Priority	High

M3-UC4: Description of FR-3.4.2

Identifier	FR-3.4.2
Title	Text Field
Requirement	User's speech will be converted to text and will be shown on search bar.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	FR-3.4.1
Priority	High

M3-UC5: Description of FR-3.5.1

Identifier	FR-3.5.1
Title	Filters
Requirement	User will click on Filters button to open filter options.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC5: Description of FR-3.5.2

Identifier	FR-3.5.2
Title	Slide Price Range
Requirement	User will slide on slider provided to adjust price range.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC5: Description of FR-3.5.3

Identifier	FR-3.5.3
Title	Select Location
Requirement	User will select location from dropdown.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC5: Description of FR-3.5.4

Identifier	FR-3.5.4
Title	Specify Category
Requirement	User will check the categories user wants to see.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC6: Description of FR-3.6.1

Identifier	FR-3.6.1
Title	Filters
Requirement	User will click on Filters button to open filter options.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC6: Description of FR-3.6.2

Identifier	FR-3.6.2
Title	Slide Price Range
Requirement	User will slide on slider provided to adjust price range.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC6: Description of FR-3.6.3

Identifier	FR-3.6.3
Title	Select Location
Requirement	User will select location from dropdown.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC7: Description of FR-3.7.1

Identifier	FR-3.7.1
Title	Suggestions
Requirement	User will type on the text field in search bar.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC7: Description of FR-3.7.2

Identifier	FR-3.7.2
Title	Generate Suggestions
Requirement	Text data from user's search bar will be taken and used to fetch similar data from database. Then similar suggestions will be shown below search bar
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC8: Description of FR-3.8.1

Identifier	FR-3.8.1
Title	Suggestions
Requirement	User will type on the text field in search bar.
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M3-UC8: Description of FR-3.8.2

Identifier	FR-3.8.2
Title	Generate Suggestions
Requirement	Text data from user's search bar will be taken and used to fetch similar data from database. Then similar suggestions will be shown below search bar
Source	Student
Rationale	This requirement is there to provide user ease in searching.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC1: Description of FR-4.1.1

Identifier	FR-4.1.1
Title	New Conversation
Requirement	User clicks on the '+' button
Source	Student
Rationale	This requirement is necessary to start a conversation.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC1: Description of FR-4.1.2

Identifier	FR-4.1.2
Title	Search Recipient
Requirement	User types recipient's name in the text field provided.
Source	Student
Rationale	This requirement is necessary to start a conversation.
Business Rule (if required)	N/A
Dependencies	FR-4.1.1
Priority	High

M4-UC1: Description of FR-4.1.3

Identifier	FR-4.1.3
Title	Select Recipient
Requirement	User selects recipient from searched results.
Source	Student
Rationale	This requirement is necessary to start a conversation.
Business Rule (if required)	N/A
Dependencies	FR-4.1.1, FR-4.1.2
Priority	High

M4-UC1: Description of FR-4.1.4

Identifier	FR-4.1.4
Title	Chat
Requirement	User selects chat button from the viewing ad.
Source	Student
Rationale	This requirement is necessary to start a conversation.
Business Rule (if required)	N/A
Dependencies	FR-4.1.1, FR-4.1.2
Priority	High

M4-UC2: Description of FR-4.2.1

Identifier	FR-4.2.1
Title	New Conversation
Requirement	User clicks on the '+' button
Source	Student
Rationale	This requirement is necessary to start a conversation.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC2: Description of FR-4.2.2

Identifier	FR-4.2.2
Title	Search Recipient
Requirement	User types recipient's name in the text field provided.
Source	Student
Rationale	This requirement is necessary to start a conversation.
Business Rule (if required)	N/A
Dependencies	FR-4.2.1
Priority	High

M4-UC2: Description of FR-4.2.3

Identifier	FR-4.2.3
Title	Select Recipient
Requirement	User selects recipient from searched results.
Source	Student
Rationale	This requirement is necessary to start a conversation.
Business Rule (if required)	N/A
Dependencies	FR-4.2.1, FR-4.2.2
Priority	High

M4-UC2: Description of FR-4.2.4

Identifier	FR-4.2.4
Title	Chat
Requirement	User selects chat button from the viewing ad.
Source	Student
Rationale	This requirement is necessary to start a conversation.
Business Rule (if required)	N/A
Dependencies	FR-4.1.1, FR-4.1.2
Priority	High

M4-UC3: Description of FR-4.3.1

Identifier	FR-4.3.1
Title	Delete Chat
Requirement	User selects delete button which appears after holding the chat for some time.
Source	Student
Rationale	This requirement is necessary to delete a conversation.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC4: Description of FR-4.4.1

Identifier	FR-4.4.1
Title	Delete Chat
Requirement	User selects delete button which appears after holding the chat for some time.
Source	Student
Rationale	This requirement is necessary to delete a conversation.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC5: Description of FR-4.5.1

Identifier	FR-4.5.1
Title	Archive Chat
Requirement	User selects archive button which appears after holding the chat for some time.
Source	Student
Rationale	This requirement is necessary to archive a conversation.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC6: Description of FR-4.6.1

Identifier	FR-4.6.1
Title	Archive Chat
Requirement	User selects archive button which appears after holding the chat for some time.
Source	Student
Rationale	This requirement is necessary to archive a conversation.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC7: Description of FR-4.7.1

Identifier	FR-4.7.1
Title	See Archive Conversation
Requirement	User selects archive button which appears in the end of chat list.
Source	Student
Rationale	This requirement is necessary to see archived conversation.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC9: Description of FR-4.8.1

Identifier	FR-4.8.1
Title	See Archive Conversation
Requirement	User selects archive button which appears in the end of chat list.
Source	Student
Rationale	This requirement is necessary to see archived conversation.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC9: Description of FR-4.9.1

Identifier	FR-4.9.1
Title	Send Text
Requirement	User types text on text field provided.
Source	Student
Rationale	This requirement is necessary to send a text message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC10: Description of FR-4.10.1

Identifier	FR-4.10.1
Title	Send Text
Requirement	User types text on text field provided.
Source	Student
Rationale	This requirement is necessary to send a text message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC11: Description of FR-4.11.1

Identifier	FR-4.11.1
Title	Send File
Requirement	User selects send file from the 'attach' button.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC11: Description of FR-4.11.2

Identifier	FR-4.11.2
Title	Select File type
Requirement	User selects file type from the popup.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC11: Description of FR-4.11.3

Identifier	FR-4.11.3
Title	Send Image
Requirement	User selects Image from the device storage.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC11: Description of FR-4.11.4

Identifier	FR-4.11.4
Title	Camera
Requirement	User selects Camera and takes the picture/video.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC11: Description of FR-4.11.5

Identifier	FR-4.11.5
Title	Send Video
Requirement	User selects Video from the device storage.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC11: Description of FR-4.11.6

Identifier	FR-4.11.6
Title	Send Audio
Requirement	User selects Audio from the device storage.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC11: Description of FR-4.11.7

Identifier	FR-4.11.7
Title	Send File
Requirement	User selects any File from the device storage.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC12: Description of FR-4.12.1

Identifier	FR-4.12.1
Title	Send File
Requirement	User selects send file from the 'attach' button.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC12: Description of FR-4.12.2

Identifier	FR-4.12.2
Title	Select File type
Requirement	User selects file type from the popup.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC12: Description of FR-4.12.3

Identifier	FR-4.12.3
Title	Send Image
Requirement	User selects Image from the device storage.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC12: Description of FR-4.12.4

Identifier	FR-4.12.4
Title	Camera
Requirement	User selects Camera and takes the picture/video.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC12: Description of FR-4.12.5

Identifier	FR-4.12.5
Title	Send Video
Requirement	User selects Video from the device storage.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC12: Description of FR-4.12.6

Identifier	FR-4.12.6
Title	Send Audio
Requirement	User selects Audio from the device storage.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC12: Description of FR-4.12.7

Identifier	FR-4.12.7
Title	Send File
Requirement	User selects any File from the device storage.
Source	Student
Rationale	This requirement is necessary to send a file message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC13: Description of FR-4.13.1

Identifier	FR-4.13.1
Title	Send Location
Requirement	User selects send location button and is shown a map on screen.
Source	Student
Rationale	This requirement is necessary to send location.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC13: Description of FR-4.13.2

Identifier	FR-4.13.2
Title	Location Coordinates
Requirement	User selects current location or drop pin.
Source	Student
Rationale	This requirement is necessary to send location.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC14: Description of FR-4.14.1

Identifier	FR-4.14.1
Title	Send Location
Requirement	User selects send location button and is shown a map on screen.
Source	Student
Rationale	This requirement is necessary to send location.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC14: Description of FR-4.14.2

Identifier	FR-4.14.2
Title	Location Coordinates
Requirement	User selects current location or drop pin.
Source	Student
Rationale	This requirement is necessary to send location.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC15: Description of FR-4.15.1

Identifier	FR-4.15.1
Title	Paste Link
Requirement	User pastes link in the text field.
Source	Student
Rationale	This requirement is necessary to send link with previews.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC15: Description of FR-4.15.2

Identifier	FR-4.15.2
Title	Link Preview
Requirement	Link preview will be shown above the text field.
Source	Student
Rationale	This requirement is necessary to send link with previews.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC16: Description of FR-4.16.1

Identifier	FR-4.16.1
Title	Paste Link
Requirement	User pastes link in the text field.
Source	Student
Rationale	This requirement is necessary to send link with previews.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC16: Description of FR-4.16.2

Identifier	FR-4.16.2
Title	Link Preview
Requirement	Link preview will be shown above the text field.
Source	Student
Rationale	This requirement is necessary to send link with previews.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC17: Description of FR-4.17.1

Identifier	FR-4.17.1
Title	Delete Message
Requirement	User presses and holds a message and selects delete button.
Source	Student
Rationale	This requirement is necessary to delete a message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC17: Description of FR-4.17.2

Identifier	FR-4.17.2
Title	Confirm
Requirement	User presses ok button to delete a message
Source	Student
Rationale	This requirement is necessary to delete a message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC18: Description of FR-4.18.1

Identifier	FR-4.18.1
Title	Delete Message
Requirement	User presses and holds a message and selects delete button.
Source	Student
Rationale	This requirement is necessary to delete a message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC18: Description of FR-4.18.2

Identifier	FR-4.18.2
Title	Confirm
Requirement	User presses ok button to delete a message
Source	Student
Rationale	This requirement is necessary to delete a message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC19: Description of FR-4.19.1

Identifier	FR-4.19.1
Title	Delete Message
Requirement	User presses and holds a message and selects delete button.
Source	Student
Rationale	This requirement is necessary to delete a message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC19: Description of FR-4.19.2

Identifier	FR-4.19.2
Title	Confirm
Requirement	User presses ok to all button to delete a message
Source	Student
Rationale	This requirement is necessary to delete a message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC20: Description of FR-4.20.1

Identifier	FR-4.20.1
Title	Delete Message
Requirement	User presses and holds a message and selects delete button.
Source	Student
Rationale	This requirement is necessary to delete a message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M4-UC20: Description of FR-4.20.2

Identifier	FR-4.20.2
Title	Confirm
Requirement	User presses ok to all button to delete a message
Source	Student
Rationale	This requirement is necessary to delete a message.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M5-UC1: Description of FR-5.1.1

Identifier	FR-5.1.1
Title	Processing
Requirement	SCM will fetch user's data.
Source	Student
Rationale	This requirement is necessary to show user relevant content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M5-UC1: Description of FR-5.1.2

Identifier	FR-5.1.2
Title	Update Model
Requirement	User's data will be used to update learning model.
Source	Student
Rationale	This requirement is necessary to show user relevant content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M5-UC2: Description of FR-5.2.1

Identifier	FR-5.2.1
Title	Processing
Requirement	SCM will fetch user's data.
Source	Student
Rationale	This requirement is necessary to show user relevant content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M5-UC2: Description of FR-5.2.2

Identifier	FR-5.2.2
Title	Update Model
Requirement	User's data will be used to update learning model.
Source	Student
Rationale	This requirement is necessary to show user relevant content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M5-UC3: Description of FR-5.3.1

Identifier	FR-5.3.1
Title	Show Recommendations
Requirement	User's will see relevant content in recommendations tab.
Source	Student
Rationale	This requirement is necessary to show user relevant content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M5-UC4: Description of FR-5.4.1

Identifier	FR-5.4.1
Title	Show Recommendations
Requirement	User's will see relevant content in recommendations tab.
Source	Student
Rationale	This requirement is necessary to show user relevant content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M5-UC5: Description of FR-5.5.1

Identifier	FR-5.5.1
Title	Take Feedback
Requirement	User's will mark recommendations as relevant or irrelevant.
Source	Student
Rationale	This requirement is necessary to show user relevant content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M5-UC5: Description of FR-5.6.1

Identifier	FR-5.6.1
Title	Take Feedback
Requirement	User's will mark recommendations as relevant or irrelevant.
Source	Student
Rationale	This requirement is necessary to show user relevant content.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC1: Description of FR-6.1.1

Identifier	FR-6.1.1
Title	Pre-Built Models
Requirement	SCM will provide pre-built 3D Models for construction sites.
Source	Student
Rationale	This requirement is necessary to show user 3D Models for homes.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC1: Description of FR-6.1.2

Identifier	FR-6.1.2
Title	Show Models List
Requirement	User will click on 3D Models to see the models list.
Source	Student
Rationale	This requirement is necessary to show user 3D Models for homes.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC2: Description of FR-6.2.1

Identifier	FR-6.2.1
Title	View Model
Requirement	User will click on 3D Model to see the models.
Source	Student
Rationale	This requirement is necessary to show user 3D Models for homes.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC2: Description of FR-6.2.2

Identifier	FR-6.2.2
Title	Rotate Model
Requirement	User can swipe to rotate the model.
Source	Student
Rationale	This requirement helps user see the models from all sides by rotating display.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC2: Description of FR-6.2.3

Identifier	FR-6.2.3
Title	Zoom
Requirement	User can pinch to zoom in and out.
Source	Student
Rationale	This requirement helps user see the models from all sides.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC3: Description of FR-6.3.1

Identifier	FR-6.3.1
Title	View Model
Requirement	User will click on 3D Model to see the models.
Source	Student
Rationale	This requirement is necessary to show user 3D Models for homes.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC3: Description of FR-6.3.2

Identifier	FR-6.3.2
Title	Rotate Model
Requirement	User can swipe to rotate the model.
Source	Student
Rationale	This requirement helps user see the models from all sides by rotating display.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC3: Description of FR-6.3.3

Identifier	FR-6.3.3
Title	Zoom
Requirement	User can pinch to zoom in and out.
Source	Student
Rationale	This requirement helps user see the models from all sides.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC4: Description of FR-6.4.1

Identifier	FR-6.4.1
Title	Save Model
Requirement	User will press save button to save model.
Source	Student
Rationale	This requirement helps user save the models for later use.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC5: Description of FR-6.5.1

Identifier	FR-6.5.1
Title	Save Model
Requirement	User will press save button to save model.
Source	Student
Rationale	This requirement helps user save the models for later use.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC6: Description of FR-6.6.1

Identifier	FR-6.6.1
Title	Share Model
Requirement	User will press share button to share model.
Source	Student
Rationale	This requirement helps user share the models with other users.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC6: Description of FR-6.6.2

Identifier	FR-6.6.2
Title	Sharing options
Requirement	User will select option from sharing options.
Source	Student
Rationale	This requirement helps user share the models with other users.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC7: Description of FR-6.7.1

Identifier	FR-6.7.1
Title	Share Model
Requirement	User will press share button to share model.
Source	Student
Rationale	This requirement helps user share the models with other users.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M6-UC6: Description of FR-6.7.2

Identifier	FR-6.7.2
Title	Sharing options
Requirement	User will select option from sharing options.
Source	Student
Rationale	This requirement helps user share the models with other users.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M7-UC1: Description of FR-7.1.1

Identifier	FR-7.1.1
Title	Make AR Objects
Requirement	SCM will create AR objects that will be used for AR decor.
Source	Student
Rationale	This requirement helps user virtually visualize the design.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M7-UC1: Description of FR-7.1.2

Identifier	FR-7.1.2
Title	Show Objects
Requirement	User will click on objects list to see objects available.
Source	Student
Rationale	This requirement helps user virtually visualize the design.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M7-UC2: Description of FR-7.2.1

Identifier	FR-7.2.1
Title	Select Object
Requirement	User will select the object by clicking on object.
Source	Student
Rationale	This requirement helps user virtually visualize the design.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M7-UC3: Description of FR-7.3.1

Identifier	FR-7.3.1
Title	Move by Drag
Requirement	User will press and hold the object.
Source	Student
Rationale	This requirement helps user virtually visualize the design.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M7-UC3: Description of FR-7.3.2

Identifier	FR-7.3.2
Title	Move by Phone
Requirement	User will move the phone to move the object.
Source	Student
Rationale	This requirement helps user virtually visualize the design.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M7-UC4: Description of FR-7.4.1

Identifier	FR-7.4.1
Title	Resize
Requirement	User will pinch to resize the object.
Source	Student
Rationale	This requirement helps user virtually visualize the design.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M7-UC5: Description of FR-7.5.1

Identifier	FR-7.5.1
Title	Place Object
Requirement	User will select 'Place' button.
Source	Student
Rationale	This requirement helps user virtually visualize the design.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M7-UC6: Description of FR-7.6.1

Identifier	FR-7.6.1
Title	Rotate
Requirement	User will press and hold 'rotate' icon and swipe on screen to rotate object.
Source	Student
Rationale	This requirement helps user virtually visualize the design.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M7-UC7: Description of FR-7.7.1

Identifier	FR-7.7.1
Title	Remove
Requirement	User will select 'Remove' button on object.
Source	Student
Rationale	This requirement helps user virtually visualize the design.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC1: Description of FR-8.1.1

Identifier	FR-8.1.1
Title	Select Authority
Requirement	User will select authority from options provided.
Source	Student
Rationale	This requirement is necessary to select receiving government body.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC1: Description of FR-8.1.2

Identifier	FR-8.1.2
Title	Enter CNIC
Requirement	User will enter CNIC in provided text field.
Source	Student
Rationale	This requirement is necessary to send application.
Business Rule (if required)	N/A
Dependencies	FR-8.1.1
Priority	High

M8-UC1: Description of FR-8.1.3

Identifier	FR-8.1.3
Title	Enter Address
Requirement	User will enter address in text field provided.
Source	Student
Rationale	This requirement is necessary to send application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC1: Description of FR-8.1.4

Identifier	FR-8.1.4
Title	Attach Requirements
Requirement	User will attach requirements in pdf or image format.
Source	Student
Rationale	This requirement is necessary to send application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC2: Description of FR-8.2.1

Identifier	FR-8.2.1
Title	Select Authority
Requirement	User will select authority from options provided.
Source	Student
Rationale	This requirement is necessary to select receiving government body.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC2: Description of FR-8.2.2

Identifier	FR-8.2.2
Title	Enter CNIC
Requirement	User will enter CNIC in provided text field.
Source	Student
Rationale	This requirement is necessary to send application.
Business Rule (if required)	N/A
Dependencies	FR-8.1.1
Priority	High

M8-UC2: Description of FR-8.2.3

Identifier	FR-8.2.3
Title	Enter Address
Requirement	User will enter address in text field provided.
Source	Student
Rationale	This requirement is necessary to send application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC2: Description of FR-8.2.4

Identifier	FR-8.2.4
Title	Attach Requirements
Requirement	User will attach requirements in pdf or image format.
Source	Student
Rationale	This requirement is necessary to send application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC3: Description of FR-8.3.1

Identifier	FR-8.3.1
Title	Address Repetitions
Requirement	SCM verifies if there is any other application for same address.
Source	Student
Rationale	This requirement is necessary because one address can have only one application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC3: Description of FR-8.3.2

Identifier	FR-8.3.2
Title	CNIC Repetitions
Requirement	SCM verifies if the applications against CNIC are not more than five.
Source	Student
Rationale	This requirement is necessary because one CNIC can have only five applications.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC4: Description of FR-8.4.1

Identifier	FR-8.4.1
Title	Address Repetitions
Requirement	SCM verifies if there is any other application for same address.
Source	Student
Rationale	This requirement is necessary because one address can have only one application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC4: Description of FR-8.4.2

Identifier	FR-8.4.2
Title	CNIC Repetitions
Requirement	SCM verifies if the applications against CNIC are not more than five.
Source	Student
Rationale	This requirement is necessary because one CNIC can have only five applications.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC5: Description of FR-8.5.1

Identifier	FR-8.5.1
Title	Manage Application
Requirement	User will press 'Manage Applications' button
Source	Student
Rationale	This requirement is necessary to see a list of applications.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC6: Description of FR-8.6.1

Identifier	FR-8.6.1
Title	Manage Application
Requirement	User will press 'Manage Applications' button
Source	Student
Rationale	This requirement is necessary to see a list of applications.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC7: Description of FR-8.7.1

Identifier	FR-8.7.1
Title	View Application
Requirement	User will click on applications
Source	Student
Rationale	This requirement is necessary to see detail of applications.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC8: Description of FR-8.8.1

Identifier	FR-8.8.1
Title	View Application
Requirement	User will click on applications
Source	Student
Rationale	This requirement is necessary to see detail of applications.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC9: Description of FR-8.9.1

Identifier	FR-8.9.1
Title	Cancel Application
Requirement	User will click on 'cancel' button.
Source	Student
Rationale	This requirement is necessary to cancel sent applications.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC10: Description of FR-8.10.1

Identifier	FR-8.10.1
Title	Cancel Application
Requirement	User will click on 'cancel' button.
Source	Student
Rationale	This requirement is necessary to cancel sent applications.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC11: Description of FR-8.11.1

Identifier	FR-8.11.1
Title	Receive Update
Requirement	SCM will receive update for application.
Source	Student
Rationale	This requirement is necessary to update user about application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC11: Description of FR-8.11.2

Identifier	FR-8.11.2
Title	Inform User
Requirement	SCM will inform user about update.
Source	Student
Rationale	This requirement is necessary to update user about application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC12: Description of FR-8.12.1

Identifier	FR-8.12.1
Title	Receive Update
Requirement	SCM will receive update for application.
Source	Student
Rationale	This requirement is necessary to update user about application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC12: Description of FR-8.12.2

Identifier	FR-8.12.2
Title	Inform User
Requirement	SCM will inform user about update.
Source	Student
Rationale	This requirement is necessary to update user about application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC13: Description of FR-8.13.1

Identifier	FR-8.13.1
Title	Change CNIC
Requirement	User will enter CNIC in provided text field.
Source	Student
Rationale	This requirement is necessary to send application.
Business Rule (if required)	N/A
Dependencies	FR-8.1.1
Priority	High

M8-UC13: Description of FR-8.13.2

Identifier	FR-8.13.2
Title	Change Address
Requirement	User will enter address in text field provided.
Source	Student
Rationale	This requirement is necessary to send application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC1: Description of FR-8.13.3

Identifier	FR-8.13.3
Title	Attach Requirements
Requirement	User will attach requirements in pdf or image format.
Source	Student
Rationale	This requirement is necessary to send application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC13: Description of FR-8.14.1

Identifier	FR-8.14.1
Title	Change CNIC
Requirement	User will enter CNIC in provided text field.
Source	Student
Rationale	This requirement is necessary to send application.
Business Rule (if required)	N/A
Dependencies	FR-8.1.1
Priority	High

M8-UC13: Description of FR-8.14.2

Identifier	FR-8.14.2
Title	Change Address
Requirement	User will enter address in text field provided.
Source	Student
Rationale	This requirement is necessary to send application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M8-UC14: Description of FR-8.14.3

Identifier	FR-8.14.3
Title	Attach Requirements
Requirement	User will attach requirements in pdf or image format.
Source	Student
Rationale	This requirement is necessary to send application.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC1: Description of FR-9.1.1

Identifier	FR-9.1.1
Title	Admin Account
Requirement	SCM will provide default admin username and password.
Source	Student
Rationale	Account will have a default username and password
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC2: Description of FR-9.2.1

Identifier	FR-9.2.1
Title	Enter Username
Requirement	Actor enters username in provided text field.
Source	Student
Rationale	This requirement is necessary to log in.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC2: Description of FR-9.2.3

Identifier	FR-9.2.3
Title	Enter Password
Requirement	Actor enters password in provided text field.
Source	Student
Rationale	This requirement is necessary to log in.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC2: Description of FR-9.2.4

Identifier	FR-9.2.4
Title	Click Login
Requirement	Actor presses log in button.
Source	Student
Rationale	This requirement is necessary to log in.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC2: Description of FR-9.2.5

Identifier	FR-9.2.5
Title	New Password
Requirement	Actor enters new password in provided text field.
Source	Student
Rationale	This requirement is necessary to log in.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC2: Description of FR-9.2.6

Identifier	FR-9.2.6
Title	Confirm Password
Requirement	Actor confirms new password in provided text field.
Source	Student
Rationale	This requirement is necessary to log in.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC3: Description of FR-9.3.1

Identifier	FR-9.3.1
Title	Enter Username
Requirement	Actor enters username in provided text field.
Source	Student
Rationale	This requirement is necessary to log in.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC3: Description of FR-9.3.2

Identifier	FR-9.3.2
Title	Enter Password
Requirement	Actor enters password in provided text field.
Source	Student
Rationale	This requirement is necessary to log in.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC4: Description of FR-9.4.1

Identifier	FR-9.4.1
Title	Forget password
Requirement	Actor presses forget password button.
Source	Student
Rationale	This requirement is necessary to set new password.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC4: Description of FR-9.4.2

Identifier	FR-9.4.2
Title	Enter OTP
Requirement	Actor enters OTP in provided text field.
Source	Student
Rationale	This requirement is necessary to set new password.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC4: Description of FR-9.4.3

Identifier	FR-9.4.3
Title	New Password
Requirement	Actor enters new password in provided text field.
Source	Student
Rationale	This requirement is necessary to set new password.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC4: Description of FR-9.4.4

Identifier	FR-9.4.4
Title	Confirm Password
Requirement	Actor confirms new password in provided text field.
Source	Student
Rationale	This requirement is necessary to set new password.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC5: Description of FR-9.5.1

Identifier	FR-9.5.1
Title	Update Profile
Requirement	Actor changes the fields they want to update.
Source	Student
Rationale	This requirement is necessary to set new password.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC6: Description of FR-9.6.1

Identifier	FR-9.6.1
Title	Add Employee
Requirement	Admin clicks on Add Employee button.
Source	Student
Rationale	This requirement is necessary to add new employee.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC6: Description of FR-9.6.2

Identifier	FR-9.6.2
Title	Email
Requirement	Admin types employee email in provided text field.
Source	Student
Rationale	This requirement is necessary to add new employee.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC6: Description of FR-9.6.3

Identifier	FR-9.6.2
Title	Role
Requirement	Admin selects employee role from dropdown menu.
Source	Student
Rationale	This requirement is necessary to add new employee.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC7: Description of FR-9.7.1

Identifier	FR-9.7.1
Title	Employee Role
Requirement	Admin selects employee role from dropdown menu.
Source	Student
Rationale	This requirement is necessary to add new employee.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC8: Description of FR-9.8.1

Identifier	FR-9.8.1
Title	Remove Employee
Requirement	Admin presses 'x' button ahead of employee info in employee list.
Source	Student
Rationale	This requirement is necessary to add new employee.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC9: Description of FR-9.9.1

Identifier	FR-9.9.1
Title	View Requests
Requirement	Employee presses the request they want to view.
Source	Student
Rationale	This requirement is necessary to view the request.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC10: Description of FR-9.10.1

Identifier	FR-9.10.1
Title	View Attachments
Requirement	Employee presses Attachments button to view the attachments.
Source	Student
Rationale	This requirement is necessary to view the request.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC10: Description of FR-9.10.2

Identifier	FR-9.10.2
Title	Download Attachments
Requirement	Employee presses Download Attachments button to download the attachments.
Source	Student
Rationale	This requirement is necessary to save the requests attachments.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC10: Description of FR-9.10.3

Identifier	FR-9.10.3
Title	Save Location
Requirement	Employee navigates to save location to save the attachments.
Source	Student
Rationale	This requirement is necessary to save the requests attachments.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC11: Description of FR-9.11.1

Identifier	FR-9.11.1
Title	Update Request
Requirement	Employee selects update status of request from dropdown menu.
Source	Student
Rationale	This requirement is necessary to send the request update to user.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC11: Description of FR-9.11.2

Identifier	FR-9.11.2
Title	Update Message
Requirement	Employee types update message in text field provided.
Source	Student
Rationale	This requirement is necessary to send the request update to user.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

M9-UC12: Description of FR-9.12.1

Identifier	FR-9.12.1
Title	Terminate Request
Requirement	Employee selects terminate status from drop down as accepted or rejected.
Source	Student
Rationale	This requirement is necessary to send the request update to user.
Business Rule (if required)	N/A
Dependencies	N/A
Priority	High

6. Non-Functional Requirements

6.1 Reliability

The Smart Construction Manager will be a reliable software in terms of execution. The MTBF will be one year. the failures might occur due to server timeouts, request management or system update.

6.2 Usability

USE-1: the SCM will allow user with a walkthrough to use the application.
USE-2: After signing up user will be able to view, select certain location with a user-friendly UI.
USE-3: User will be given a popup every time they select a confirmation option regarding any option to ensure error avoidance.

USE-4: Account recovery options will be provided for user in case of forgetting password, through mail and cell no.
USE-5: The user will be able to interact with sellers/buyers, Govt bodies & construction companies to garner the required information and perform the consequent actions efficiently.
USE-6: User can access and view the status of pending requests, moreover user can view all the former projects and their related information. User can access their account through multiple platforms.

6.3 Performance

PER-1: User's profile will be loaded within 4-5 sec on a speed of 10mbps and higher.
PER-2: The request for the forwarding letter might take up to 30-60sec depending upon the response from the concerned server.
PER-3: System can simultaneously facilitate 1000 users without any delay, however response time might vary for a larger figure.
PER-4: The request to check activation status for any option might take up to 30-60sec.

6.4 Security

SEC-1: The webpage must be HTTPS with additional security layer.
SEC-2: Captcha will have to completed in case of inactivity.
SEC-3: Website SEO will be done to prevent hacking attacks.

6.5   Scalability

1. Smart Construction Manager right now is targeted towards CDA, in future it will support multiple development authorities
2. SCM can be scaled to global level and support development authorities all around Pakistan and not just Islamabad.

6.6   Availability
Smart Construction Manager will be completely available and can be used anywhere anytime.

6.7   Responsive
1. SCM will be totally responsive supporting:
    a. extra small (less than 576px);
    b. small (576-768px);
    c. medium (768-992px);
    d. large (992-1200px);
    e. extra-large screens (1200px and Greater).
2. The features available on both web and mobile app, will be designed in three steps, small medium and large.

6.8   Recoverability
SCM will provide the client complete account recovery options.

6.9   Manageability
1. SCM provides friendly user interfaces to manage user data
2. User will have proper tabular view of applications they want to manage.
3. Admin portal will also have requests in proper tabular format.

7. External Interface Requirements

Most of our project requires to be built from scratch. We will be using our own APIs to handle data transfer. But for location we will use Geolocation API (Google's API for location).
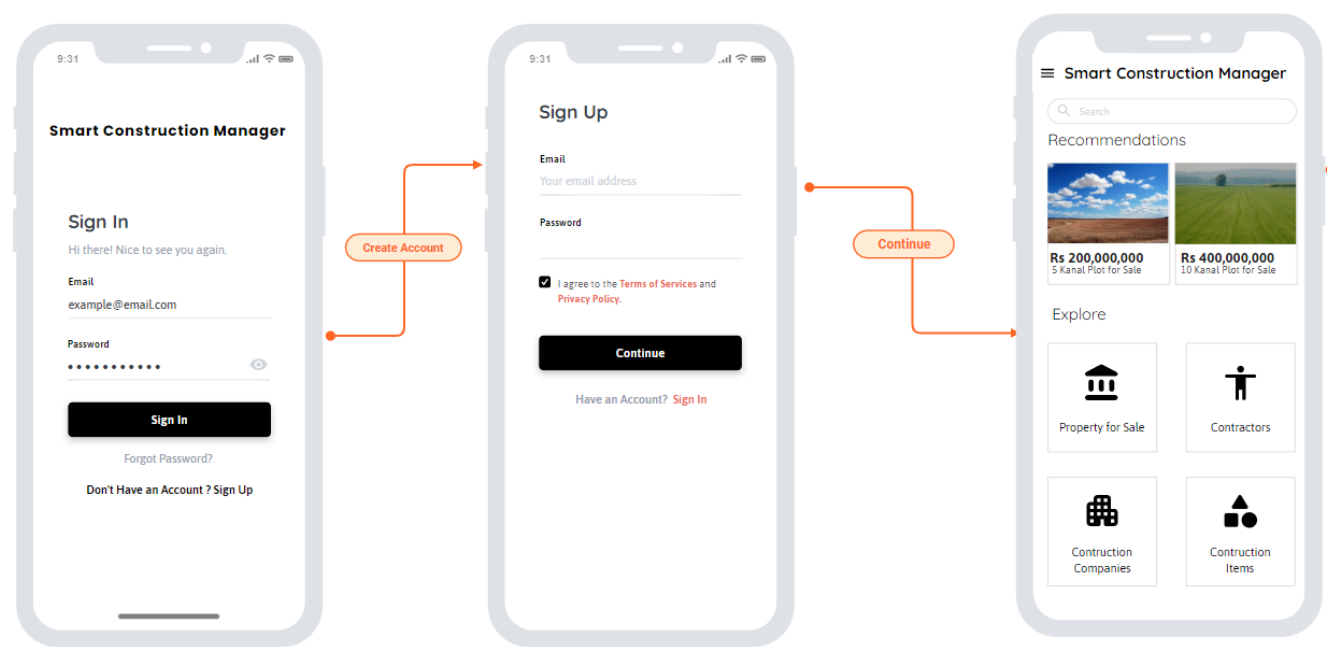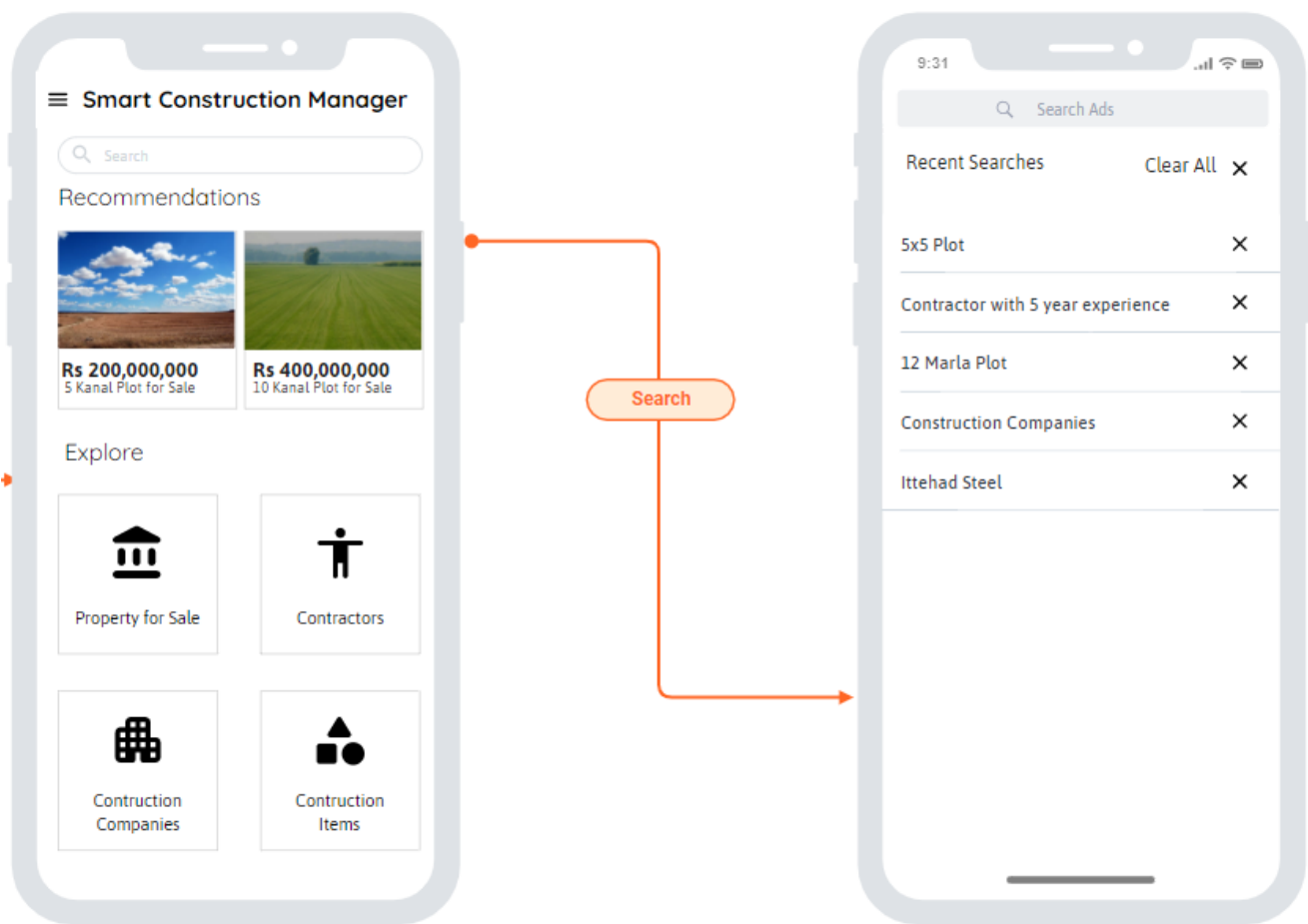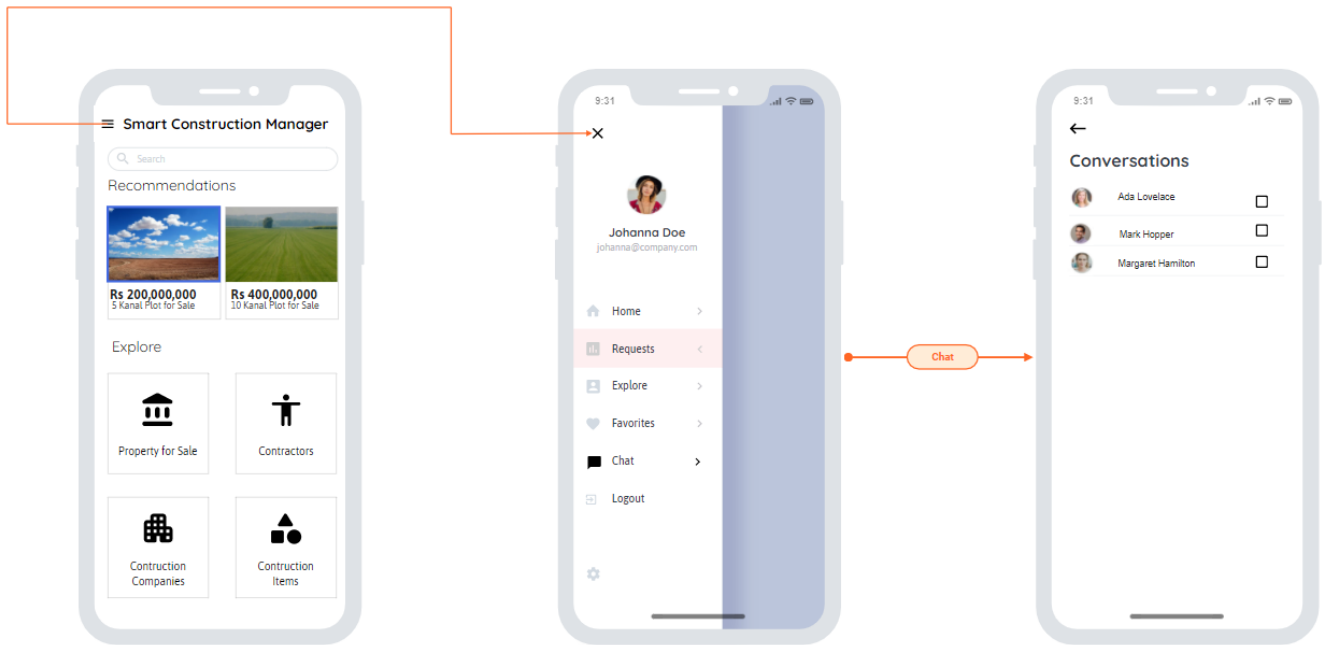
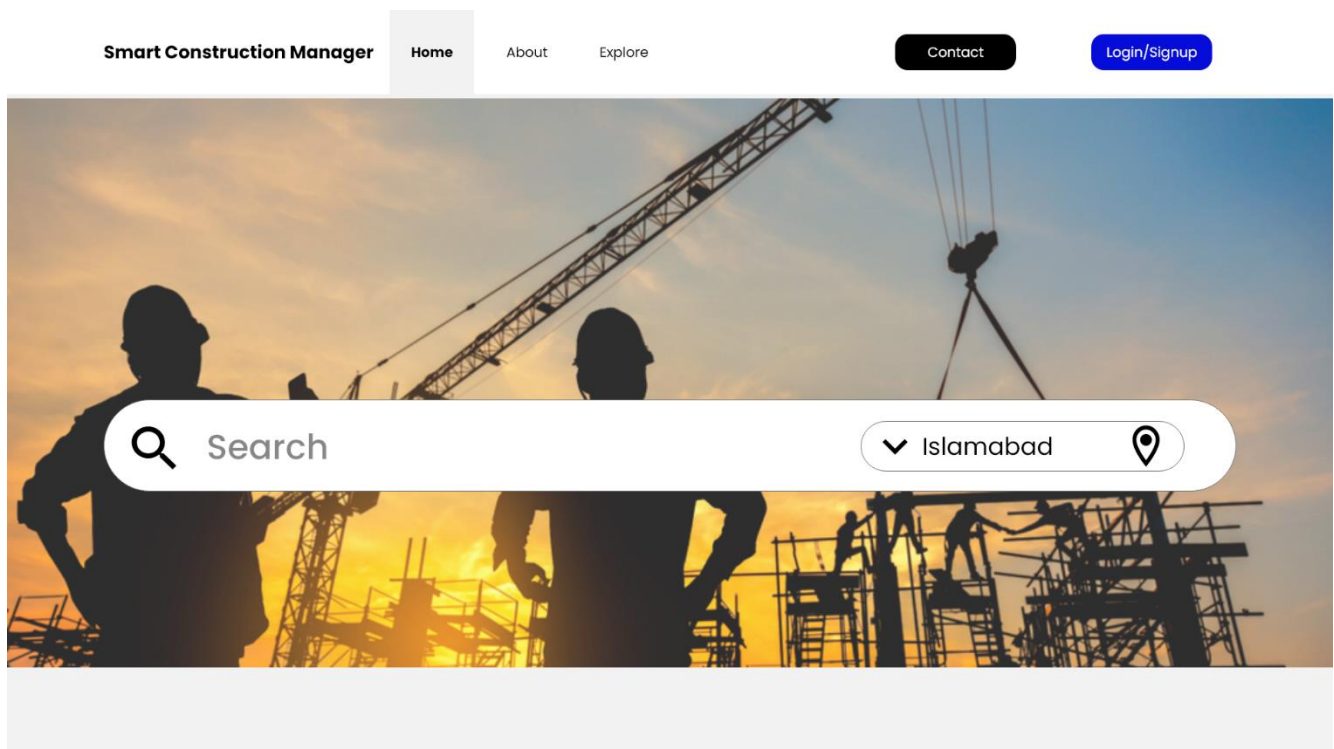## 7.1   User Interfaces

Figure 2: Mobile Home

Figure 3: Mobile Search

Figure 4: Mobile Chat

Figure 5: Web Home Interface

7.2 Software Interfaces

The application uses MongoDB Database Management System to store public posts.

The application uses React JS for front end designing in web.

The application uses Express JS for back end development.

The application uses React Native for Mobile Development.

The application stores project data in JSON format to enable easy integration with 3rd party applications.

7.3 Hardware Interfaces

The application requires Android Mobile device with at least Android 6.0, an IOS device with minimum IOS 9 or any desktop computer capable of running a Web Browser.

7.4 Communication Interfaces

The application requires active internet connection which can be achieved in several ways. The application user must have working email or phone number in order to fully take advantage of the application.

8. Project Gantt Chart

ID	Task Name	Start	Finish	Duration	Q1 21	Q2 21	Q3 21	Q4 21
1	Scope Document	12/31/2020	2/1/2021	23d				
2	SRS Document	2/3/2021	3/19/2021	33d				
3	Evaluation 1: Scope and SRS Presentation	3/18/2021	3/18/2021	1d				
4	SDS Document	3/18/2021	4/7/2021	15d				
5	30% Implementation	4/7/2021	5/11/2021	25d				
6	Evaluation 2: SDS Document & 30% Implementation	5/31/2021	5/31/2021	1d				
7	60% Implementation	5/31/2021	8/20/2021	60d				
8	Evaluation 3: 60% Implementation	8/20/2021	8/20/2021	1d				
9	Testing and Debugging	8/20/2021	9/30/2021	30d				
10	100% Implementation	9/30/2021	11/17/2021	35d				
11	Evaluation 4: Testing, Debugging and 100% Implementation	11/17/2021	11/17/2021	1d				
12	Project Evaluation	11/17/2021	12/15/2021	21d				

Figure 6: Gantt Chart for Targeted Project

9. Conclusion

Smart Construction Manager garners the needs and requirements in each and every detail in the SRS document. Each Requirement Mentioned in the form of use cases is carefully analyzed from both Patron & Clients Perspective. The careful analysis of requirements provides Users with a sophisticated system ensuring ease in the process of construction and other commodities and forming invariably an efficient system. So, the document shows how we are planning to take our project in coming year. We will be implementing each part of our project according to the Gantt chart mentioned above and are fully motivated to complete the project.

10. Appendices

SCM: Smart Construction Manager.

11. References

[1]   CDA,   Procedures   (SOPs),   https://www.cda.gov.pk/resource_center/procedures.asp#proc8, 3/7/2021. (web site)

12. Plagiarism Report

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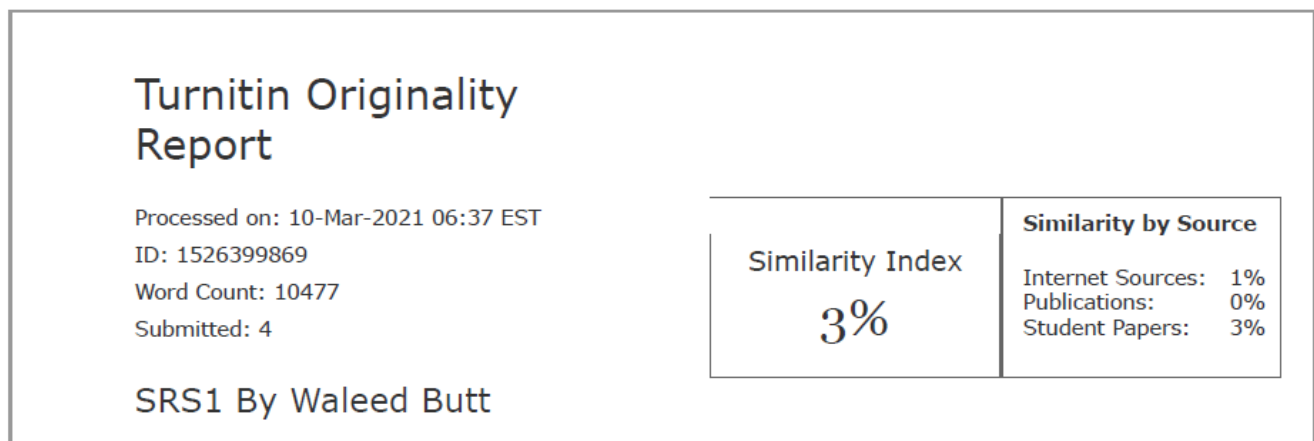
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