Software Requirements Specification

for

All-Access

Version 2.0

Prepared by

Dominic Baker

Mikala Simons

Demarcus Johnson

11/30/22

Table of Contents

Revision History

Name	Date	Reason For Changes	Version

1. Introduction

Accessibility on college campuses has been a consistent problem. Students and faculty that have mobility aids such as wheelchairs may find it hard to navigate certain campus buildings and areas. All-Access is a mobile app that will allow people to leave reviews about the accessibility of buildings on Virginia State University's campus. These reviews will allow incoming students to know what potential accessibility issues they will have on campus.

1.1 Purpose and Intended Audience

The purpose of this document is to allow potential users to understand the functionality our app will provide and our process during development.

1.2 Project Scope

The scope of the project is to give users with disabilities an opportunity to look up building information that they attend to visit. The user will also be able to leave reviews on the building so other people could go back and look at others' responses. As well as leaving reviews the user is able to leave ratings on the building to let others know how accessible it is to others with disabilities. They would also be able to get the information on the buildings as well. The user would be able to see the department heads of the buildings. As well as knowing the department heads they would also be able to see their contact information.

1.3 Terms, Definitions, and Acronyms

Accessibility - The quality of being easily reached, entered, or used by people with disabilities.
Android- A phone operating system
C#- One of the programming languages used to develop the app. Mainly assists with the app's functionality.
Database- A structured set of data held in a computer
IOS- A phone operating system
Operating system- System software that manages device hardware, software resources, and provides common services for device programs.
Server- A computer or computer program which manages access to a centralized resource or service in a network
UI - User interface. What the user can see and interact with on the app.

Voice-recognition- The ability of a machine or program to receive and interpret dictation or to understand and carry out spoken commands
Xamarin Forms- One of the programming languages used to develop the app. Mainly used to create the visible aspects of the app.

1.4 References

https://learn.microsoft.com/en-us/xamarin/xamarin-forms/

https://youtu.be/e3bjQX9jIBk

https://www.youtube.com/playlist?list=PLKShHgmYjjFwmuUZ46GxeSTA2zKZF-8nv

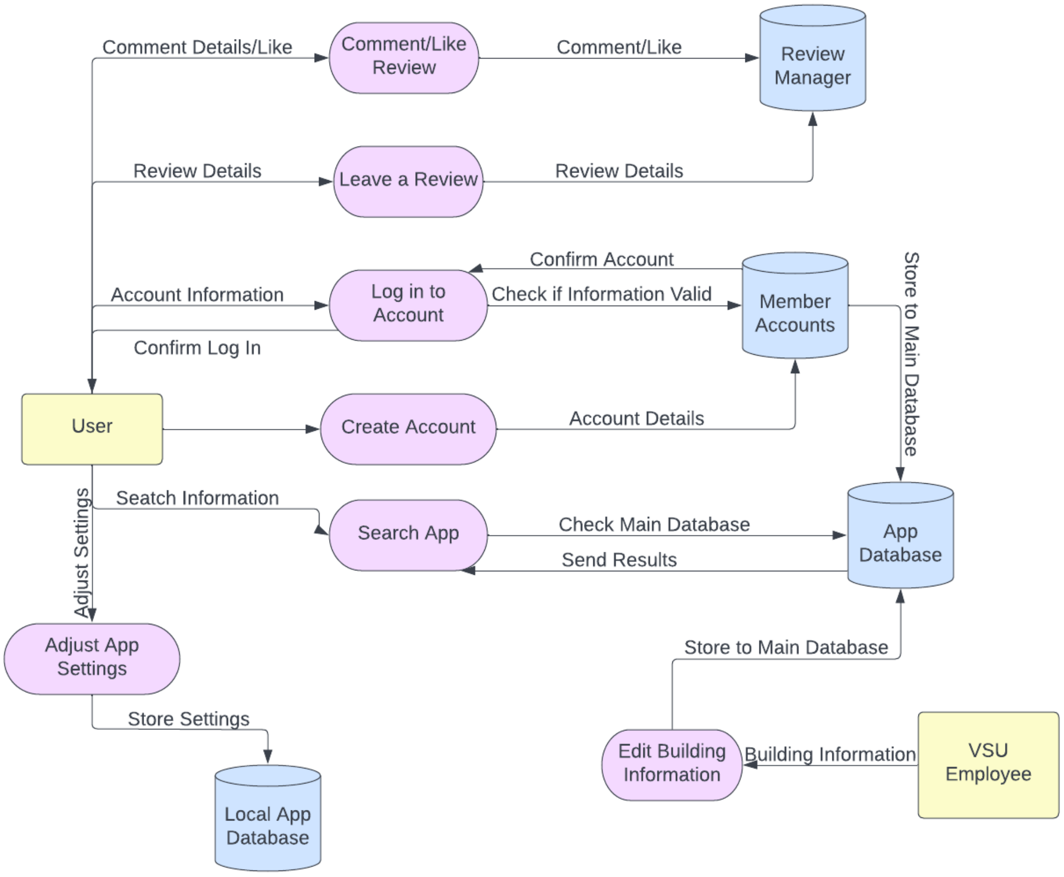
https://www.c-sharpcorner.com/article/xamarin-forms-create-a-login-page-mvvm/

2. Overall Description

All-Access is a mobile review app that will allow students to leave reviews about the accessibility of buildings on Virginia State's campus. The goal of the app is to provide a place for people with mobility aids to talk about their experience navigating campus, and allow incoming students or visitors to gauge what their experience would be like on campus.

2.1 Product Perspective

The app will give users the ability to obtain information of any Virginia State University campus buildings consisting of its unique history, accessibility and its heads of the departments in those specific buildings and gather their contacts and their availability as well.



Data Flow Diagram

2.2 Product Features

- Able to leave reviews on buildings
- Give a building a rating depending on how accessible it is
- Change the app appearance to help users with certain disabilities
- Show building information that will give the information about the building and department heads
- Voice Recognition to help navigate through the menu
- Simple yet ease of use User Interface that everyone should be to navigate easily

2.3 User Classes and Characteristics

- College students- average tech skill level
- College Faculty- a little below average tech skill level

- Student family member- below average tech skill level
- Potential students- average tech skill level

2.4 Operating Environment

The app was created for Virginia State University. So in this case the environment of the application would be academic.

2.5 Design and Implementation Constraints

This section details all constraints upon the product being developed, whether customer mandated or policy/regulatory requirements, e.g., a particular operating system.

- Mobile app (Android)
- No website version
- Must follow Virginia State Guidelines

2.6 Assumptions and Dependencies

- The use of xamarin forms in order to create the app for android. And have limited access to convert it into an iOS app.
- Use of built in C# voice recognition
- Use of the local database e.g. system storage

3. System Features

Specific functionality for any person currently accessing the app:

- Read reviews
- Read building information
- Leave a review
- Add a new building

4. Non-Functional Requirements

- Functionality - users can look at building information, leave reviews
- Usability - download app, mobile phone touch screen to navigate menus
- Reliability - apps should rarely crash while using it, perform regularly to ensure the app keeps running smoothly.
- Performance - with an emulator it loads up slowly. but while in the app it runs smoothly and quickly. with local storage the performance would increase.
- Supportability - Would release updates to increase stability and fix bugs found in the app.

5. External Interface Requirements

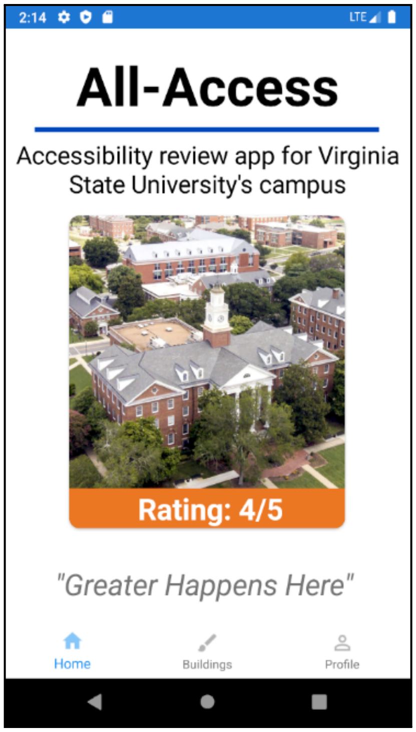
These requirements include user and hardware interfaces including interaction logic between software and user, screen layouts, buttons, functions on every screen. Also, software interfaces like frontend and backend stack, database management system.

5.1 User Interfaces

This section describes any external system user interfaces that may be required by the system, e.g., a console window.

- Screen on phone
- Virtual keyboard on phone
- Touch panel on phone

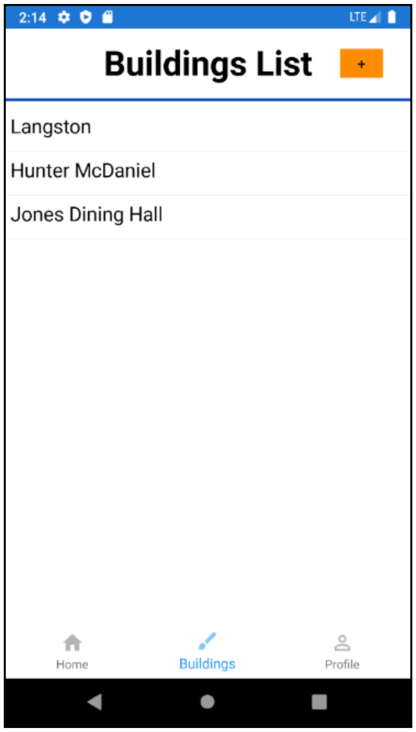
Our UI design:



All-Access

Accessibility review app for Virginia State University's campus

"Greater Happens Here"

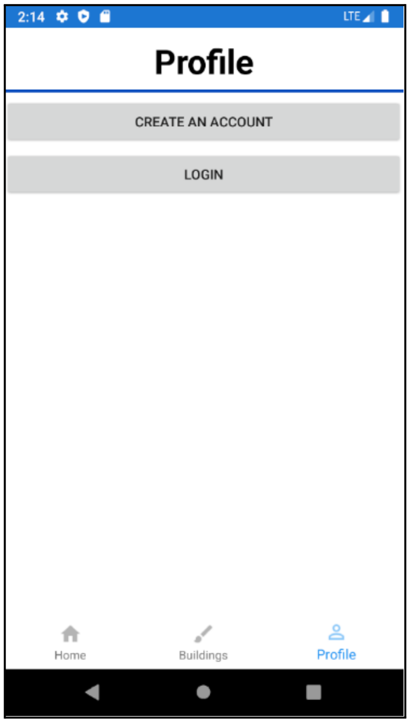


Buildings List

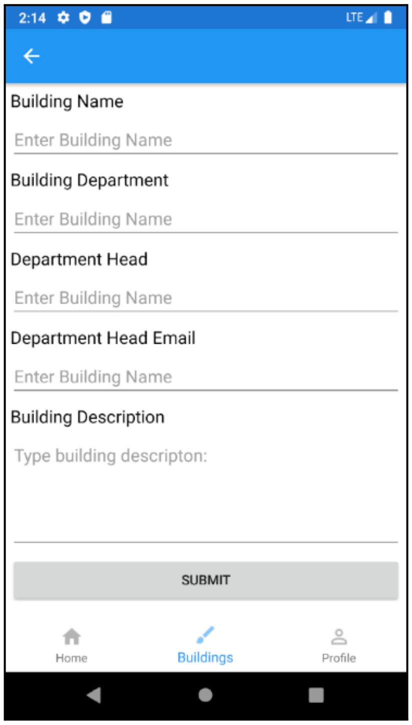
Langston

Hunter McDaniel

Jones Dining Hall



Profile



Building Name

Enter Building Name

Building Department

Enter Building Name

Department Head

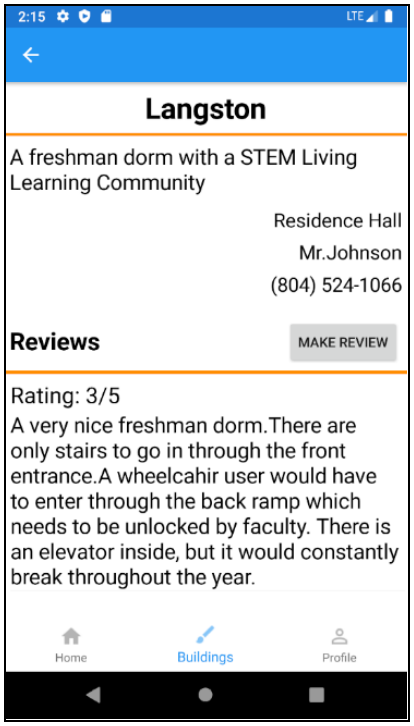
Enter Building Name

Department Head Email

Enter Building Name

Building Description

Type building descripton:



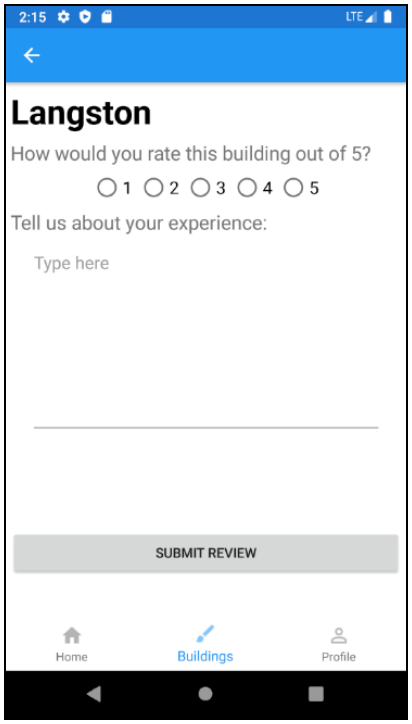
Langston

A freshman dorm with a STEM Living Learning Community

Residence Hall
Mr.Johnson
(804) 524-1066

Reviews

Rating: 3/5
A very nice freshman dorm.There are only stairs to go in through the front entrance.A wheelcahir user would have to enter through the back ramp which needs to be unlocked by faculty. There is an elevator inside, but it would constantly break throughout the year.



Langston

How would you rate this building out of 5?

○ 1 ○ 2 ○ 3 ○ 4 ○ 5

Tell us about your experience:

Type here

5.2 Hardware Interfaces

This section describes any external system hardware interfaces, e.g., an analog to digital converter that may be required by the system.

- Android Phone

5.3 Software Interfaces

This section describes any external software interfaces, e.g., input files to this system that were created by another software system.

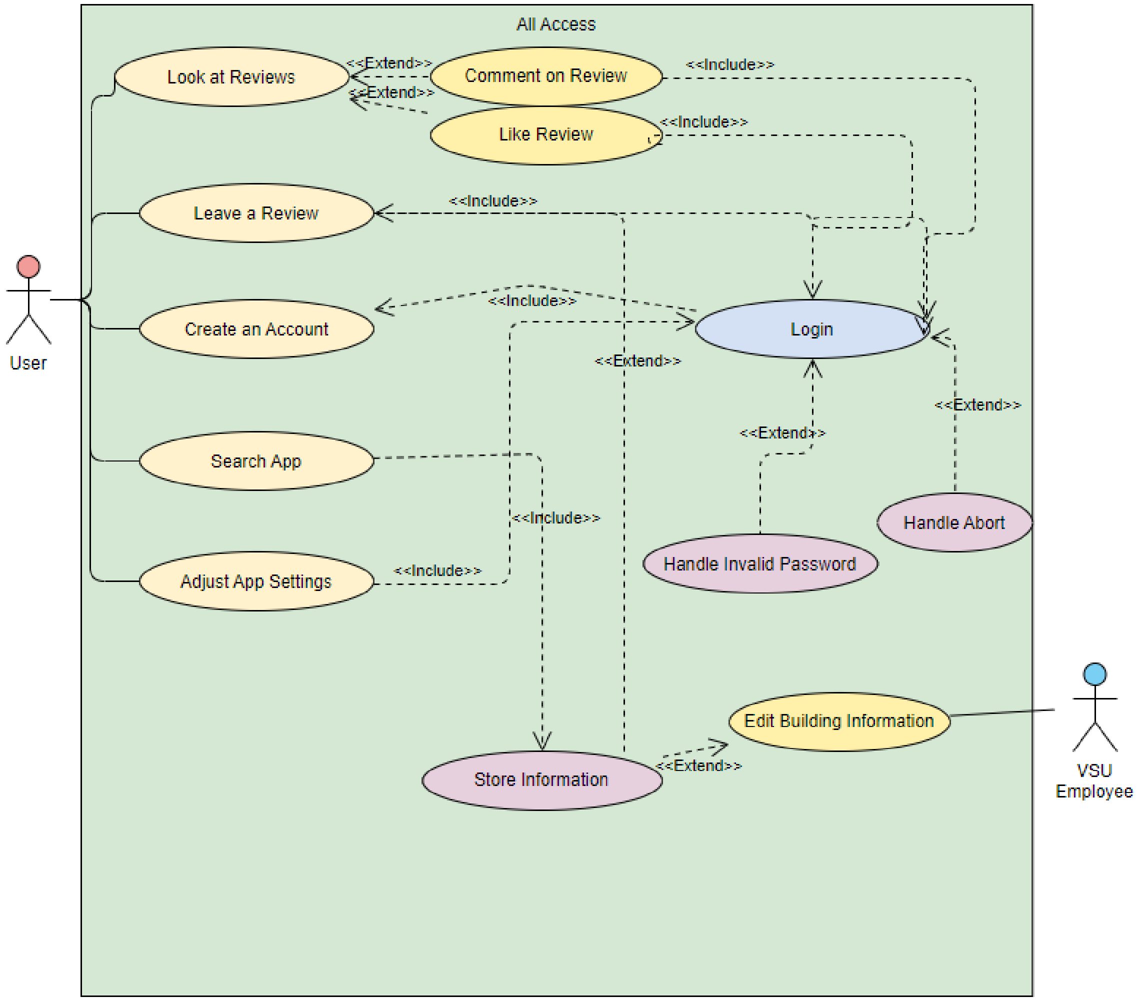
- Xamarin Forms
- C#

5.4 Communication Interfaces

None

6. Detailed Use Cases

Use Case Diagram



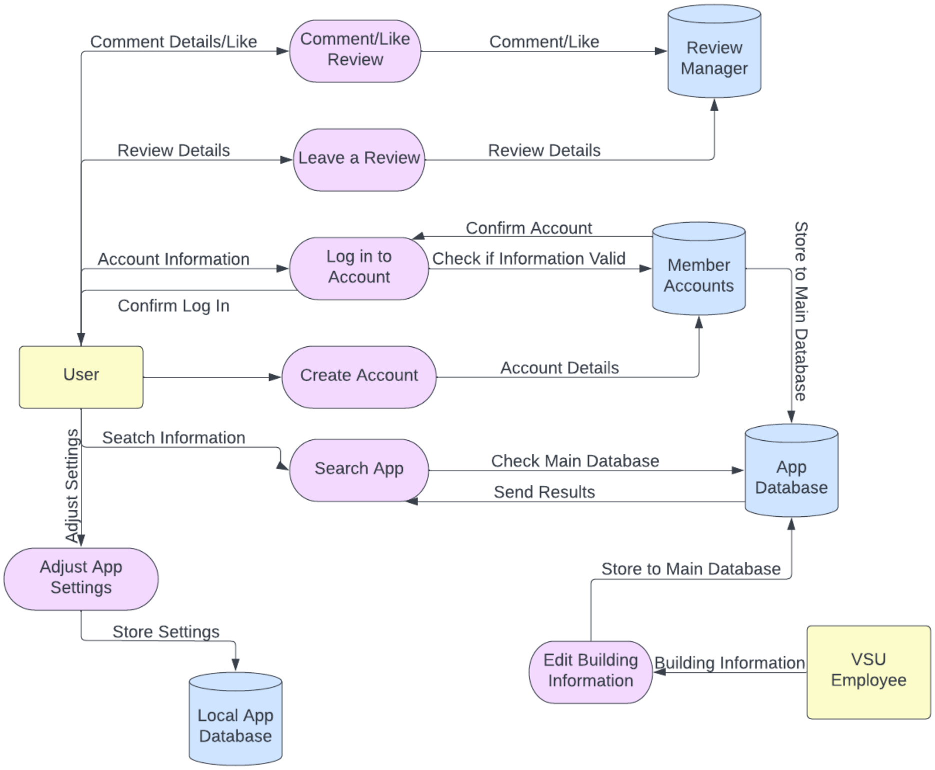
7. Appendix

Project Description:

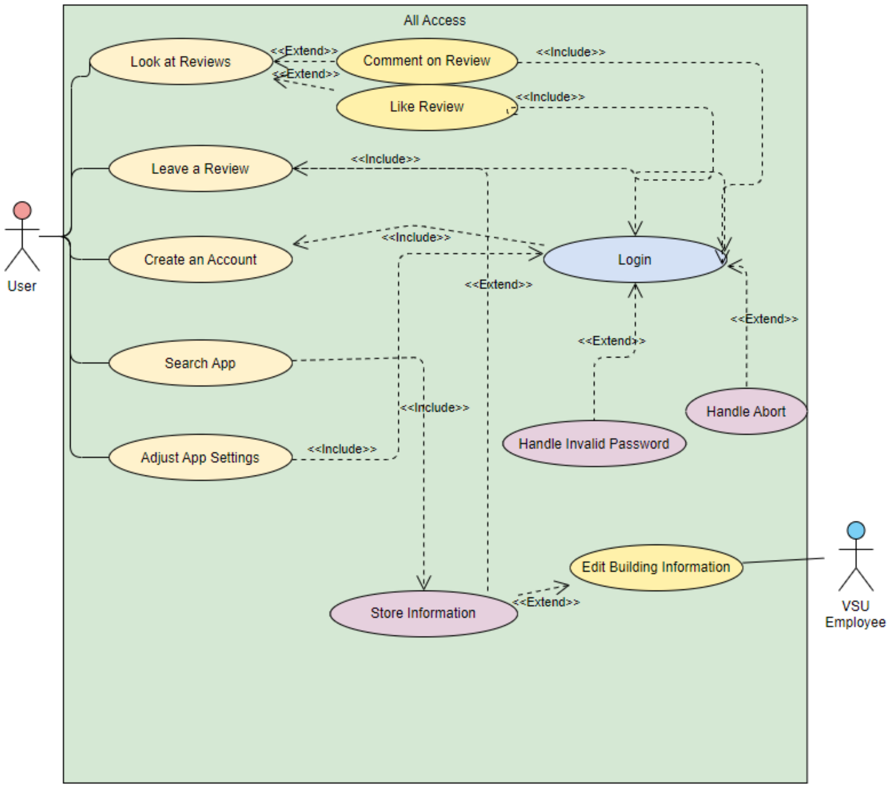
https://docs.google.com/document/d/10iMlIAjCeu79oZrleW4XsfMZRzEr6nSCbPzqpY8UKJY/edit

Project Summary : https://docs.google.com/document/d/1Rl5mxw3Ng-0Fpoj_A45KyScAoRzUflTg-jcWtclmfEk/edit

Data flow Diagram:



Use Case Diagram:


All Access
Look at Reviews
<<Extend>>
Comment on Review
<<Include>>
<<Extend>>
Like Review
<<Include>>
Leave a Review
<<Include>>
User
Create an Account
<<Include>>
Login
<<Extend>>
<<Extend>>
<<Extend>>
Search App
<<Include>>
Handle Abort
Handle Invalid Password
Adjust App Settings
<<Include>>
Edit Building Information
VSU Employee
Store Information
<<Extend>>