

# **Facility Sense: Student Lead Facilities Feedback Web Application**

## **Requirements Specifications**



### **Team Best Team**

Joseph Guerrero

Chanse Cramer

Luke Clancy

Course: CptS 322 - Software Engineering Principles I

Instructor: Sakire Arslan Ay

## TABLE OF CONTENTS

<b>I.</b>	<b>INTRODUCTION</b>	<b>4</b>
<b>II.</b>	<b>REQUIREMENTS SPECIFICATION</b>	<b>4</b>
II.1.	CUSTOMER, USERS, AND STAKEHOLDERS	4
II.2.	USER STORIES	4
II.3.	NON-FUNCTIONAL REQUIREMENTS	5
<b>III.</b>	<b>USER INTERFACE REQUIREMENTS</b>	<b>5</b>
<b>IV.</b>	<b>REFERENCES</b>	<b>5</b>
	<b>APPENDIX: GRADING RUBRIC</b>	<b>6</b>

## I. Introduction

The Inspiration of the project came from my(Joseph's) Dad's work experience as a Director of Facilities at a university. The Divide between Facilities persons and the people that use them is enormous. People can forget that this is a team effort. Study rooms don't clean themselves. From my Dad's own anecdotes, Facilities people feel invisible to the people that they serve. This application is a way to help bridge that gap.

The Goal of this project is to create a proof of concept regarding real time feedback regarding the student's thoughts, suggestions, and opinions of a specific building, down to the floor by floor level. In further revisions in the future, this service could spread to the vast majority of buildings in a University. This can provide valuable data regarding how students make use of their spaces that they have access to, as well as incentivize students to be more aware of the surroundings they have been provided.

We are doing this through a web application that allows users to choose buildings and then building floor plans to view. On this floor plan there will be a grid sectioning allowing users to notice whether other users have commented on this section. To view the comments, the user can click on the section. This will cause an unobtrusive box to come up on the web-page displaying past comments. They then have the option to leave a comment themselves. Users make their account through giving their email address and password. Possible functionality that may be included is email verification.

Section 1 includes the introduction and Document revision history. The Introduction helps give context to the project and an overview of project goals.

Section 2 includes Requirements specification. This is where we provide functional requirements for the project.

Section 3 includes UI requirements. Here we provide some insight into the look and feel of the application.

### Document Revision History

Rev 0 09-13-2017	Concepts Drawn and submitted.
Rev 0.5 09-25-2017	Major revision of design scope to prepare to Requirements Submission.
Rev 1.0 09-27-2017	Added the UI mockups, checkup and review.

## II. Requirements Specification

- The Ability to sign in as a Student with a Washington State University Email, so that spam and unwanted users can be minimized. Anyone outside of a wsu.edu email will not be able to proceed. E-mail Addresses must be verified before account activation is complete.
- Each .edu User should be welcomed to a set of buildings to choose from, (Working Prototype will only have 1, but all designs should have expandability for any number of buildings).
- When a building is selected, a detailed floor-plan of the building is displayed, with each floor in a separate tab, and each floor divided into transparent cells.

- The User can click on a number of a building's floor, and view/select the floor indicated on the tab.
- Each cell has a form of indicating that there is feedback for that specific area of the building. This is given by a color and/or number so a user can identify activity at a glance.
- The User can click on a cell, and from that click, display any feedback that was posted to that area.
- From this Cell's menu, the user can enter a page to create feedback of their own for the cell in question.
- Within the feedback page, the user can specify the type/subject of the feedback they are going to post, as well as more detailed feedback limited to 1,000 characters. Subjects include but are not limited to: Suggestion, Complaint, Compliment, Feedback.
- The User's post is added to the cell, and is available for viewing for other users. A timestamp is included for greater context of each post.
- The user can logout, and end their session.

## **II.1. Customers Users and Stakeholders**

The Customers for the software are Facility managers, workers and students at a university. Through giving a platform to students to comment on certain parts of a building we increase facility usage and provide valuable data for facility members. With a direct ear to what students have been thinking about portions of a facility, workers are able to feel more involved in the surrounding community. Facility will know better where areas of concern are, as well as know directly from the students that they are doing a great job.

The Users for the software are students at a university, be they Matriculated or not. The students themselves make for an essentially untapped source of feedback regarding the facilities that they use every day. The Users can bring their voice to the table regarding their thoughts and opinions of these places, and thus, give them power to excite positive change as well.

The Stakeholders are the Faculty leaders and university alumni. It is essential that the public image of the university is kept high through word of mouth. Feedback down to the very rooms and study halls that students use can provide a specific amount of clout to the general public, which can be quite valuable.

## II.2. Use Cases

### Use case # 1

Name	The student's perspective: The Study Space lookover.
Users	Felicity, a Computer Science student at a university.
Rationale	Felicity is thinking of finding a new place to study, so she opens up the Facility Sense webpage to check on other student's opinions on some of the study rooms.
Triggers	Felicity is thinking of finding a new place to study, so she opens up the Facility Sense webpage to check on other student's opinions on some of the study rooms.
Preconditions	The Building in question needs to be on the Facility Sense directory, and at least one of the study rooms has already had a user submit some public feedback regarding their experience there.
Actions	Felicity Opens the Facility Sense webpage, selects the building that she wishes to get feedback from. After a building is selected, a High resolution floorplan is displayed on screen, divided into square cells. At a glance, notes that there are a handful of user reviews are present. She selects one of the cells in the floor plan, color coded by its reviewed state and the rating of the review. She notes that a team on Saturday noted the room within one of the cells onscreen was clean and had plenty of outlets. Knowing this, she logs out and puts that study room into good use.
Postconditions	The Data of other facility reviews are accessed by a registered user, and Felicity is now better informed on study rooms in the building.
Acceptance Tests	A Registered user can: Access the website, open a page with a selection of buildings and/or floors, access another user's review of an experience in a certain position of the floor.
Iteration	Final Product scenario: Aspects such as Multiple building access are goals for a much more advanced iteration of the project. Absolute essentials include nested navigation across tabs, (to be implemented in the first phases). Next,

Name	The facilities perspective
Users	Steve, A facility's member of a certain building
Rationale	Steve has recently done maintenance on a building and would like to see the feedback regarding a recent repair
Triggers	Steve opens up the website, looks at the map and notices that people are happy with his contributions
Preconditions	The Building in question needs to be on the Facility Sense directory, and at least one of the study rooms has already had a user submit some public feedback regarding their experience there.
Actions	He is happy that his maintenance seems to be doing well - and he knows for a fact he has done good work. He also feels closer to the community that he has done so much to support.
Postconditions	He can either post a comment in the same area, or leave the website

Acceptance Tests	A Registered user can: Access the website, open a page with a selection of buildings and/or floors, access another user's review of an experience in a certain position of the floor. He can then respond to that by posting his own comment.
Iteration	Final Product scenario: Aspects such as Color Coding and Multiple building access are goals for a much more advanced iteration of the project. Absolute essentials include nested navigation across tabs, (to be implemented in the first phases). Next,

Repeat the above for each use case.

### II.3. Non-Functional Requirements

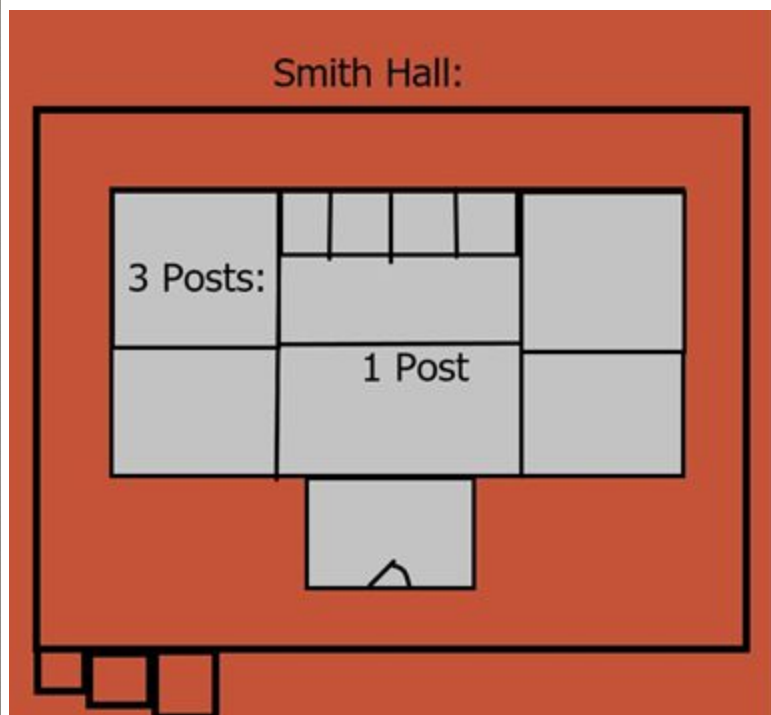
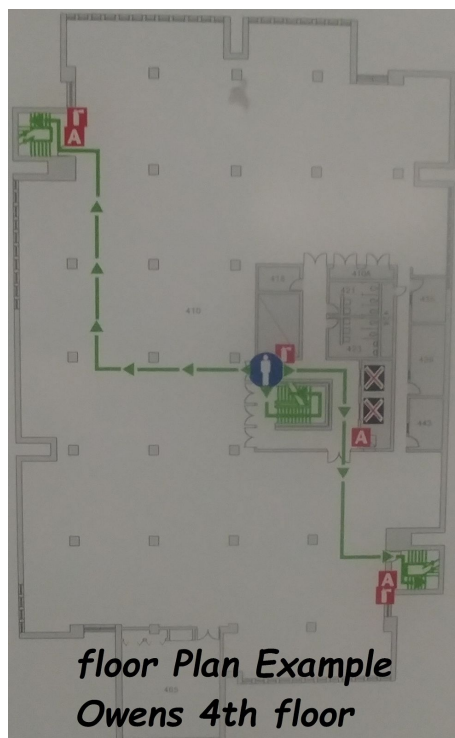
List the non-functional requirements in this section.

You may use the following template for non-functional requirements

1. [Enter a Concise Requirement Name]: [provide a concise description, in clear and easily understandable language to specify the requirement]

### III. User Interface Requirements

We have an example of a floor plan and a photoshop drawing below. We are currently in the process of acquiring more detailed floor plans outside of the escape routes. For now we have some examples of how the map might look below. Keep in mind that the maps will be split up into multiple sections.



Here are some examples of the login and new account functionality.

Project Requirements Specifications

## Facility Sense - Login Page

Email:

Password:

New Account: When pressed this button will bring you to the new account Email Confirmation page.  
Login: When pressed this button will bring you to the main app page.

## New Account Email Confirmation

Email:

Next: If the Email Account is authorized (a wsu.edu email account) then the user's browser page will go to the Facility Sense New Account page. Their email account will also receive an email from our app with a confirmation code. If their account is not authorized a pop up comes up saying the email address is invalid.

# Facility Sense - New Account

Nick Name:	<input type="text" value="Nick Name"/>
Password:	<input type="password" value="Password"/>
Confirm Password:	<input type="password" value="Password repeated"/>
We emailed you a confirmation code - Please enter it below.	
<input type="text" value="Confirmation Code"/>	
<input type="button" value="Create Account"/>	

Create Account: If the Create Account button is pressed, on the condition that your Confirmation Code checks out, you are brought to the home page of Facility Sense.

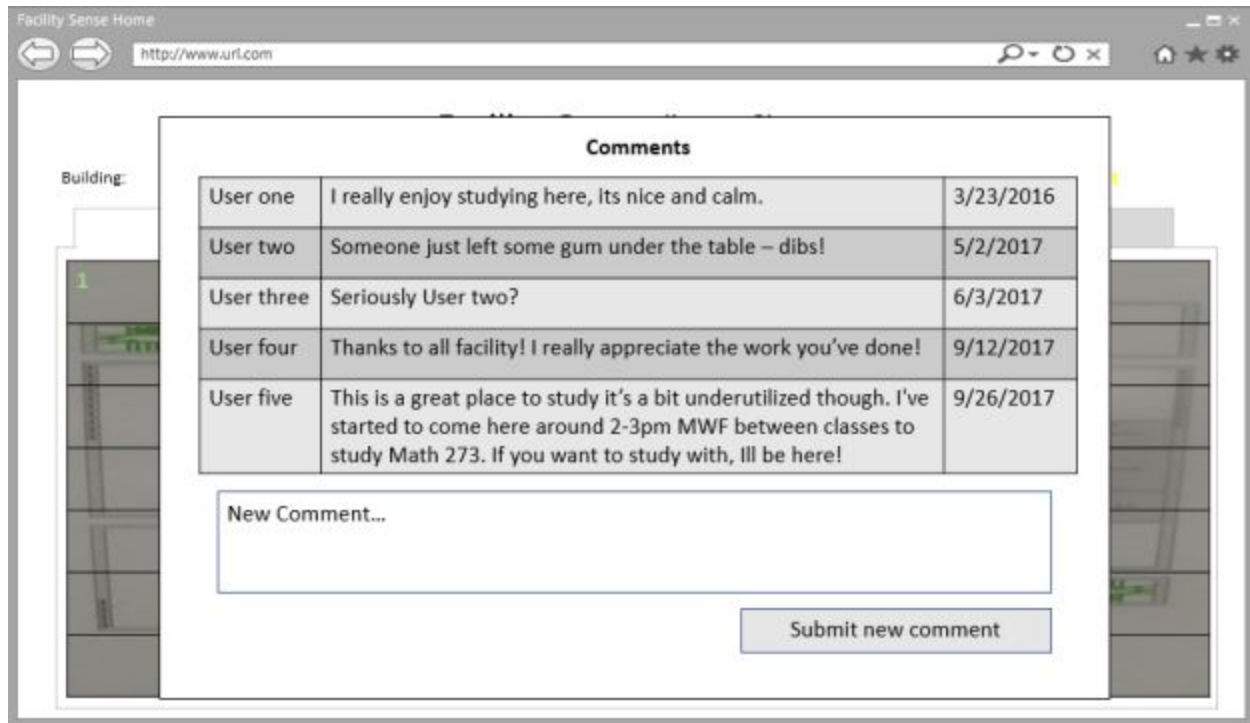


Building Drop Down menu: If you click the drop down menu you will see a list of the included buildings. Clicking a new option will bring you to that building.

Floor Tabs: The tabs indicate floors. If you click a new floor the floor plan will change to the corresponding floor.

Colored numbers: If you click one of the colored numbers, you are brought to the comment box below. The comment box is on top of this screen, and is not a new web page.





The comments are un-regulated in the version we are making and may be subject to unrelated comments. You can see this through User two's comment, and user three going off topic. The positive aspects as you can see in comments one, four and five vastly outweigh these drawbacks.

Submit new comment: this button will allow you to leave your own comment.

Clicking outside the box: This will bring you back to the screen above.

UI ELEMENTS arranged by "classes".

Sign in Page:

Form for Username and Password:

Submit button:

Buildings UI:

Building:

Floors:

Floor Plan with Cells:

Displaying all Individual Cells:

Singular Cell:

Cell Content:

Posts:

Create-Posts:

Submit-Post

Project Requirements Specifications

#### **IV. References**

We used floor plans posted in Buildings Around WSU. We have taken the photos ourselves due to time and access constraints.