SOFTWARE ENGINEERING

#Project_No :- 02

OCCUPANCY MONITORING SYSTEM
Android Application

Introduction

‘Project Class’ is a real-time occupancy monitoring system android application, which will display regular updates information about the occupancy of the buildings.It will automatically not allow anybody after the building has reached its safety capacity.This system is mainly made keeping focus of auditorium buildings and will also be able to manage events.

Goal and Motivation

In this era of modern technology, monitoring the occupancy of the rooms of a building of our institute or any other place by a single person counting will be like of a fool.

So, our main goal of this project is monitor by digital method like in our case through an android application.

Challenges

- The most challenging we have faced was connecting database to the app
- We have faced issues related to real-time counting data of the users.

Potential Customer

Since our main purpose is to monitor the occupancy of a building. So, we mainly can say that it's effective use will be in

- In Institutes, where administrations can monitor through the app.
- In hotels, auditoriums and all the places where user gather and admin need control over the occupancy situation.

REQUIREMENTS

- The devices should always be connected to the internet.
- There should be enough database space for storing the information.
- Application should be able to render it's layout to different screen sizes.
- Minimum 2 GB of ram is needed for smooth running of application
- Minimum SDK version Android 4.0.3

SRS

3. System Features and Requirements

3.1 Functional Requirements

We describe the functional requirements by giving various use cases.

Use Case 1:

Name: Login
Summary: Allows Admin/user to login.
Actors: User , Admin
Pre-conditions:
• Internet connectivity.

- Have all required details .

Main success scenario:
• Admin/user clicks on login button.

- Checks for the authorization of login.
- Redirected to homepage with access.

Extension:
Id or password incorrect. Shows error dialog box.
>Contact admin and provide necessary details

Use Case 2:

Name: Sign Up
Summary: Allows user to signup/registration.
Actors: User
Pre-conditions:
• Internet connectivity.

- Have all required details .

Main success scenario:
• user clicks on signup button.

- Fill all the essentials to sign up .

- Redirected to login page.

Use Case 3:

Name: Choose building
Summary: Allows users to choose building.
Actors: User
Pre-conditions:

- Internet condition
- Logged in as user

Main success scenario:

- the user will be able to choose the building he/she wanted to enter

Use Case 4:

Name: Choose room
Summary: Allows user to choose a room.
Actors: User
Pre-conditions:

- Internet condition
- Logged in as user

Main success scenario:

- the user will be able to choose the room of the building he/she wanted to enter.

Use Case 5:

Name: Monitor
Summary: Allows Admin to monitor the count of entering individuals.
Actors: Admin
Pre-conditions:

- Internet condition

Main success scenario:

- logged in with admin privileges
- grant access to view occupancy per room of the buidings.

NON-FUNCTIONAL Requirements

3.2 NON - FUNCTIONAL Requirements :-

- The device should always be connected to the internet.
- There should be enough database space for storing the information.
- Application should be able to render it's layout to different sizes.
- The app should be user friendly, quick in response.

3.3 HARDWARE Requirements :-

- It runs on Android based devices.
- Minimum 2 GB of ram is needed for smooth running of application.

3.4 SOFTWARE Requirements :-

- Minimum SDK version Android 4.0.3

3.5 DESIGN CONSTRAINTS :-

- FAULT TOLERANCE --

  Data should not become corrupted in case of system crash or power failure.

TEST PLAN

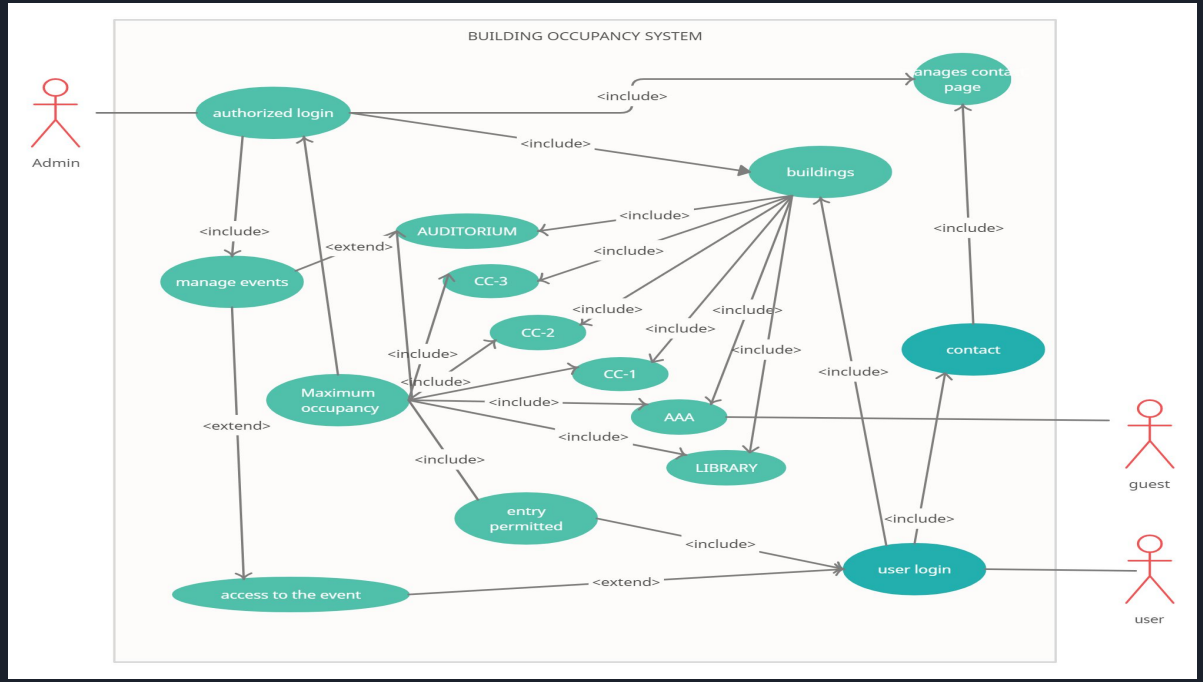
Link for test plan:

https://drive.google.com/file/d/1EFSpuGe6ucvVdJqNfKDuVx_8IBfK_mJW/view?usp=sharing

Traceability matrix

https://drive.google.com/file/d/1ZZmWjrIglwtgKURYAOtXtEmLv-RMe5pw/view?usp=sharing

USE CASE DIAGRAM



USE CASES

USE CASES	Description Of Use Cases
Login	Allow the user/admin to login
Sign Up	Allow the user to Sign Up
Choose Building	Allow the user to choose his building
Choose Room	Allow the user to choose his room
Monitor	Allow the admin to monitor the count of users

TECH USED

FRONT END DEVELOPMENT

TECH USED

BACK END DEVELOPMENT

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THANK YOU