System Development Report

PROJECT NAME: SMART VENDING MACHINE

COURSE NAME: INTEGRATED DESIGN PROJECT-02
COURSE CODE: CSE-460

GROUP NO: JULIETT (08)

SECTION: A

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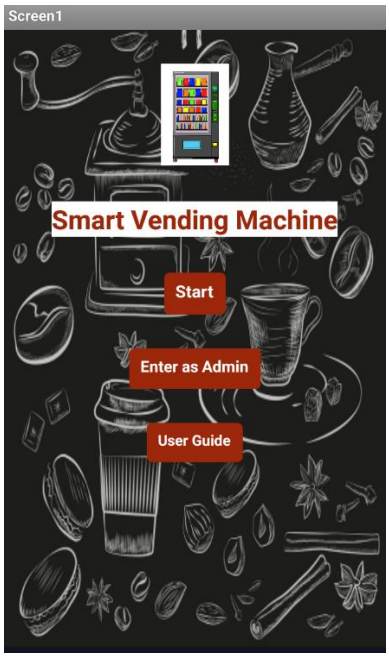
Required Platforms:

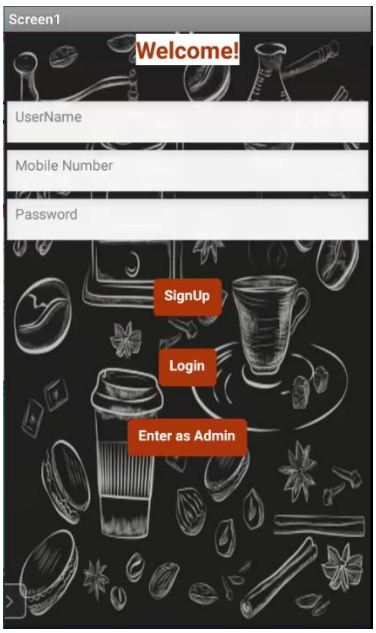
Name	Description
MIT App Inventor 	MIT App Inventor is a free and open-source web application integrated development environment to create apps for Android and iOS. For this project the version for Android has been used to make the Smart Vending Machine (SVM) app.
Firebase 	Firebase is an online database platform developed by Google for creating mobile and web applications. Up to 1GB data can be stored in this platform. This platform has been used to connect with the backend database for our app.
GitHub 	GitHub, Inc. is a provider of Internet hosting for software development and version control using Git. It has been used for access control, task management, continuous integration to collaborate the whole project remotely.
Arduino IDE 	The Arduino Integrated Development Environment (IDE) is a cross-platform application written in functions from C and C++. It is used to write and burn the codes to interact among different hardware parts and the app of our project.

UI Snapshots:

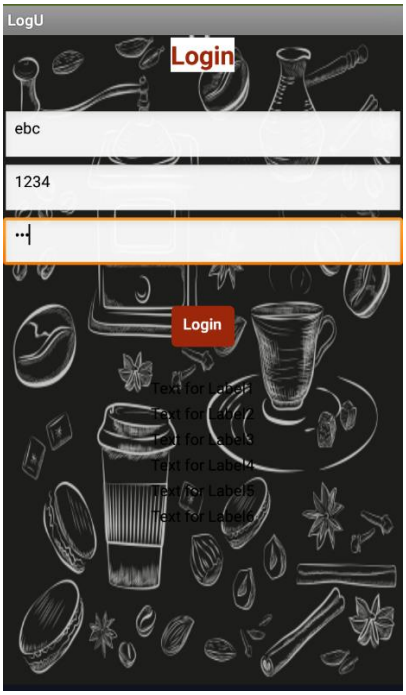
Start Page:



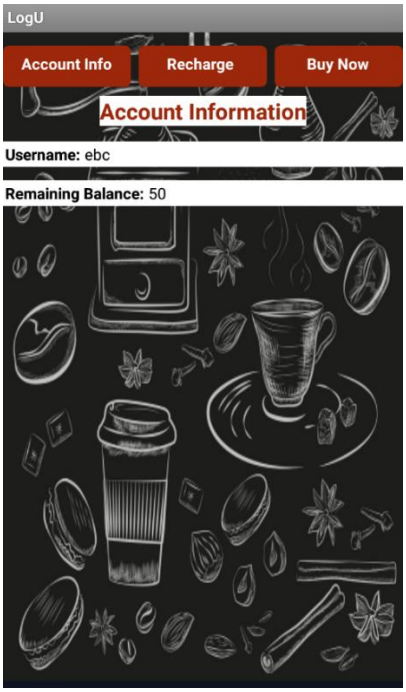
Sign Up Page:



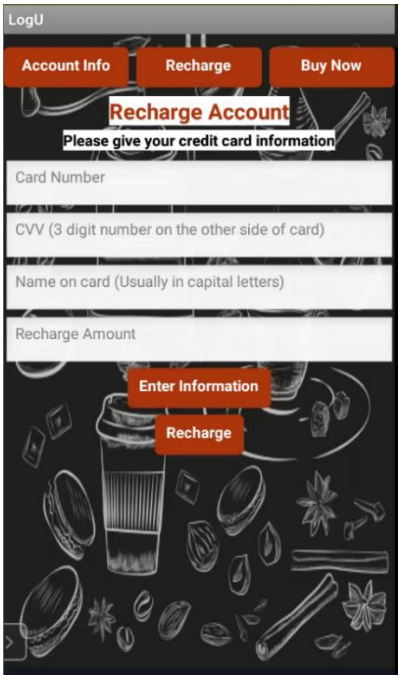
Login Page:



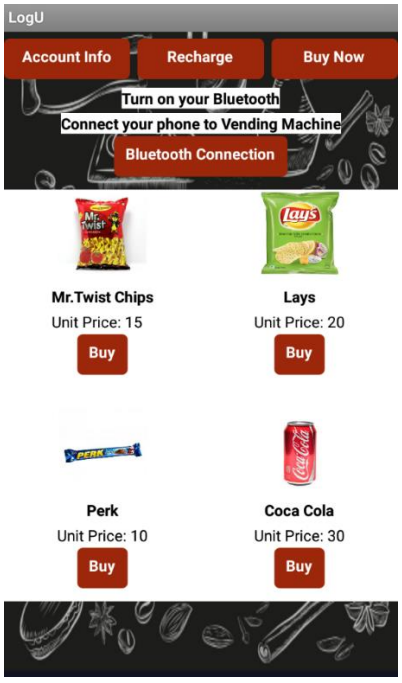
User Account Information Page:



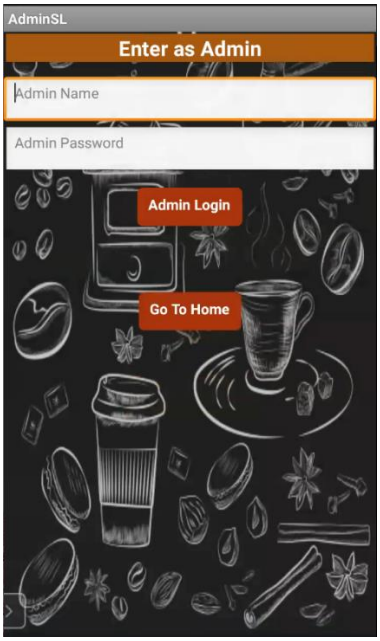
Recharge page for user:



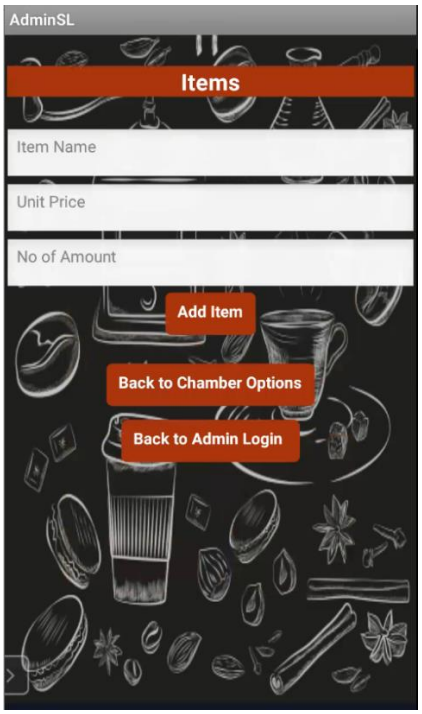
Buy Now for user:



Login page for admin:



Add Item page for admin:



Scenario 1:

A user can buy an item from this Smart Vending Machine using SVM app. First, he has to register in the app then he will be automatically logged in. After that, he has to connect his mobile to Bluetooth and connect the vending machine with the phone. Then he can choose items from the vending machine using the app. The app will check if his online mobile banking account is sufficient or not. If it is not sufficient then the app will tell the user to recharge his account. If the balance is sufficient the item will get dispensed in the take-out port. The user will be requested to accept the item from the port. The balance will be credited and the purchase is complete.

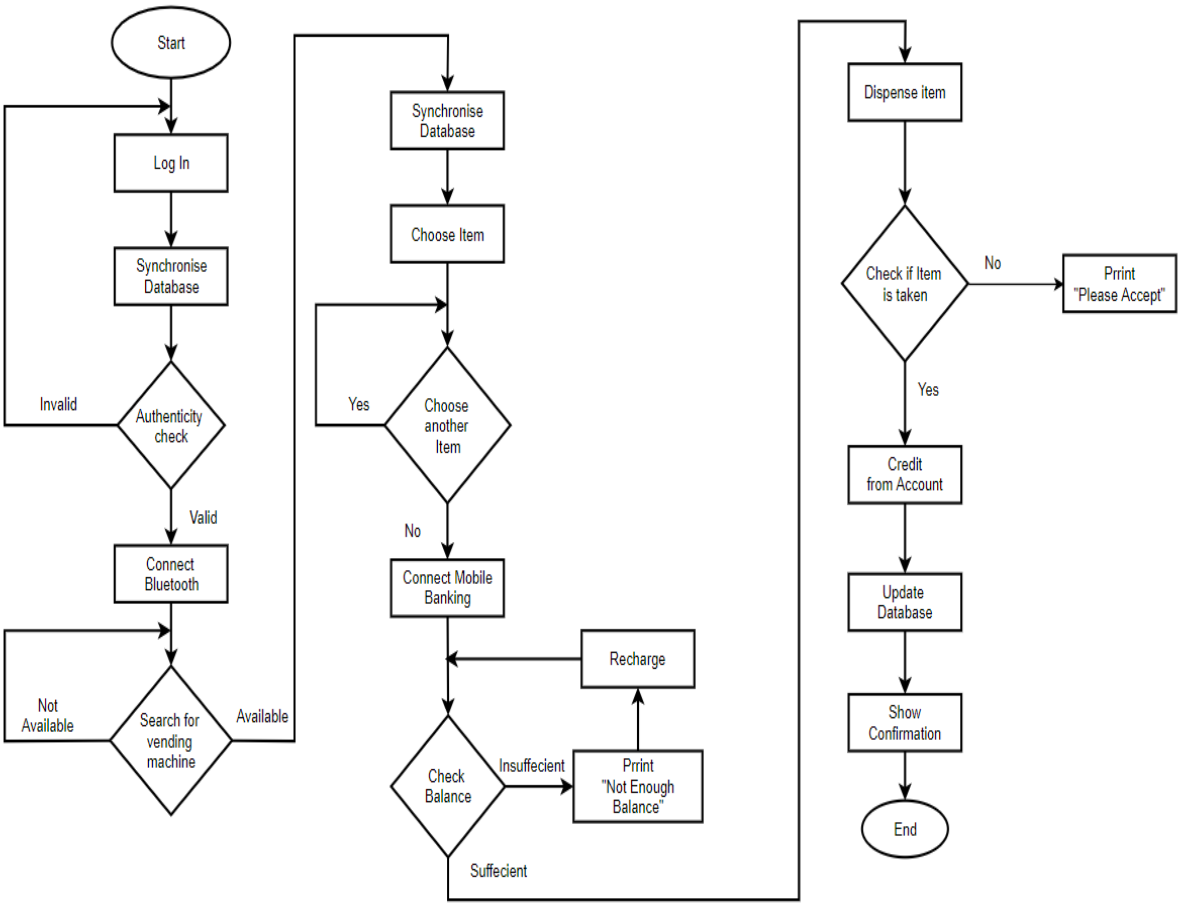


Fig:1: Flow diagram for scenario-1

Scenario 2:

The admin of the app can access the system by logging in. There are two options: vending machines and manage complaints. There are four options in the vending machine section. He can modify, add or delete any item in the system.

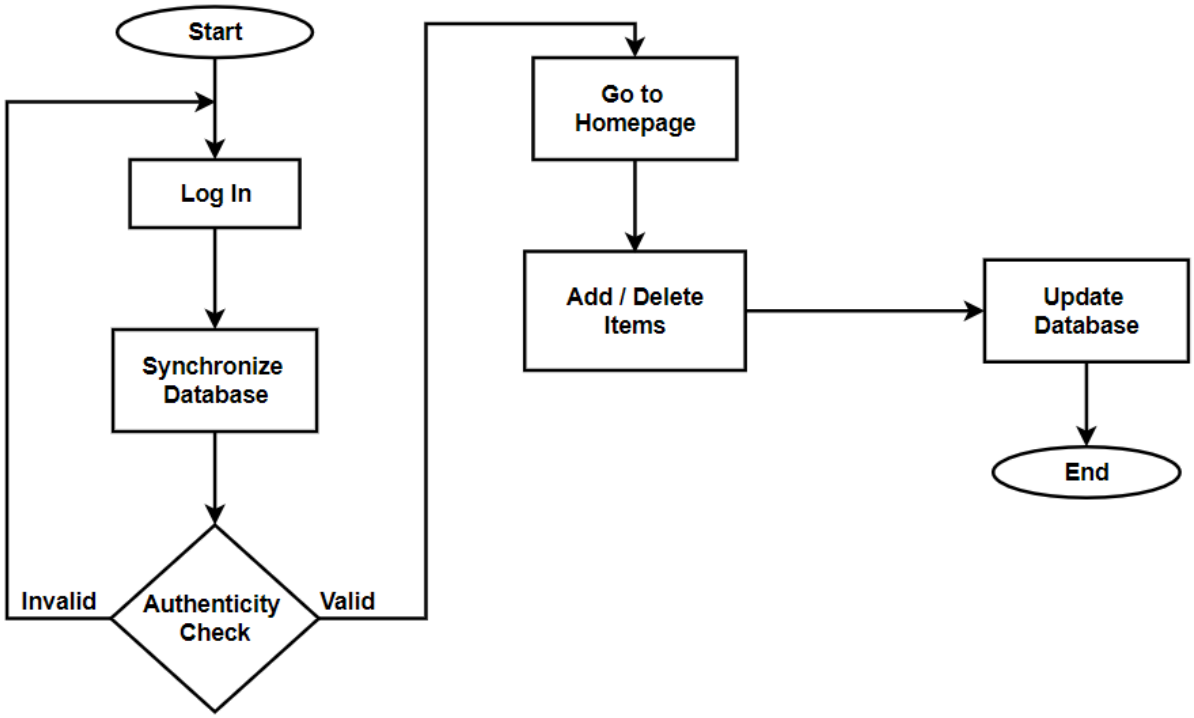


Fig:2: Flow diagram for scenario-2