LAB 4

Coffee Vending Machine

Problem statement

There is a need for a machine which is automated doesnt require manual operating to dispense coffee. The contents used should be uniform and the acceptance of payment needs to be handled. It should be extensible, reusable, and modular.

SRS

- The vending machine must have money box, coin slot, display screen and products

- The user on selecting a coffee, machine should be able to dispense it.

- The user places empty cup below filter. He shall be able to choose his preferred beverage.

- There must be buttons for the user to interact with the system.

- User should be able to make changes by adding extra money. He should be able to quit dispensing at any time during the process.

- The system shall check for properly inserted coins.

- Coffee needs to be dispensed after a coin is inserted.

- System must accept coins of different amount and validate them.

- System shall be able to detect low amount of Ingredients and low no. of cups and indicate with an LED.

Coffee Vending Machine
Class Diagram

Display
- conv: int
- Items: list
- display()

Coin_slot
- coinvalue: int
- coincount: int
- countcoin()
- calculatetotal()

Customer
- gender: string
- add()

User
- name: string
- id: int
- details()
- edit()
- delete()

Staff
- salay: int
- phone no: int
- update()

Money box
- coins: int
- coincount()
- return coin()
- total()

Vending_machine
- id: int
- type: string
- name: string
- dispense Product()
- check Availabilty()
- update Product()

Product
- name: string
- price: int
- update()
- retrieve()

Selector
- items: list
- Ingredients: list
- select()
- edit()

coffee_machine
- A_sugar: int
- P_milc: int
- P_coffee powder: int
- add item()

dispense
- quantity: int

has
has
has
select
select

1..*
0..1