Snack Shop

Snack Vending Machine

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" In this project, a customer can buy particular products keeping social distancing and a person will run a business effortless. Normally we buy snack from a general shop but how about we make it easier for the seller and customer by placing an automated Snack Machine that has a user-friendly interface

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Problem

- According to the current **pandemic situation Covid-19,** Government suggested to keep social distancing everywhere
- People hesitate going into crowded shops
- Sellers would like to run his business
- People also need different products from the stores
- People require a safe and easy method to buy their desired products.
- Sellers need a record of his inventory

Solutions

✔ **Automated Machine**

People can buy products by keeping social distancing. The seller will have to do a little effort. This machine would work automatically and has little maintenance. Every request will be processed by computer program rather than a person. Seller will have a record on his inventory.

✔ **User-Friendly**

It will provide Customer and Seller with easy approach. It would show the abstract details to both, the customer and the seller. Every time when a customer will perform a transaction he will be provided with a receipt of his transaction details.

✔ **Report**

Provide the user with complete statistics about his inventory. It would provide the Seller with the complete detail of products sold and the demand of particular product. After all day it would generate a report present it to the seller in a well mannered way so, that he knows which products are high on demand and which are low. In this way he could invest economically and focus better on the particular demand of the customer

Solutions

✅ **Admin Login**

Admin logons through the User Account

Information, i-e. Username and Password.

✅ **Machine Management**

Admin controls the machine by using the

following modules:

- Start machine
- Add items
- View items
- Delete items
- Search items
- Check sale
- Stop machine

✅ **Report**

Admin have all the record of his inventory.

Admin can view the sales and Purchases of the

individual products.

✅ **User friendly interface for the customer**

- Customer can use the machine very easily.
- All the available items are shown to the customer.
- Customer is provided with detailed bill receipt.

✅ **File based Record Keeping**

- A data file is created in the folder which contains

  all the stats of the actions performed.

Proposed Class Diagram

product HashMap : Integer,String
+ addProduct() : void
+ deleteProduct() : Integer
+ searchProduct() : Boolean
+ viewProduct() : void

purchaseRegister
-stockHashmap : Integer
- purchasePriceHashMap : Integer
+ setQuantity () : int
+ setWholesale () : int

Main
Main Method

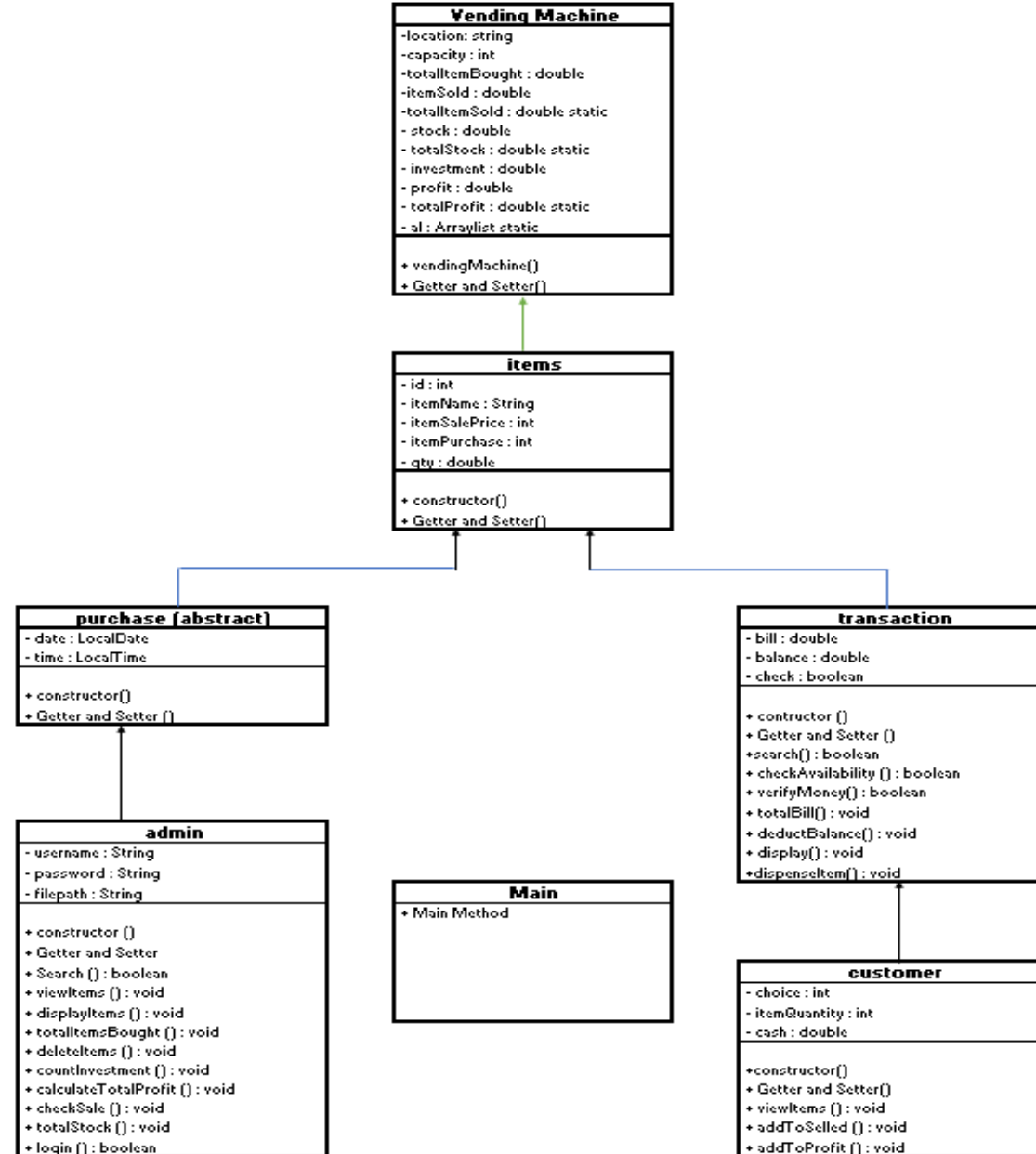| salesRegister |
| --- |
| - SoldHashMap : Integer |
| - salePriceHashmap : Integer |
| + setQuantity() : void |
| + setWholesalePrice() : void |

Salesman
- Investment : Integer
- Profit : Integer
+ calcInvestment() : Integer
+ calcProfit () : Integer

customer
- money : Integer
- keyValue : Integer
+ setMoney() : void
+ setKeyValue() : void

Report
-Demand () : Integer

Class Diagram of Submitted Project

Solutions:

Admin Login

- Admin needs to login to perform further tasks.

- The different usernames and passwords are stored in a csv data file.

```
Enter username for admin
admin
Enter password
123
```

Machine Management

- Admin can add different items.
- Admin can view all the items.
- Admin can search the items.
- Admin can delete the items
- Admin can check his sale.
- Admin can start the machine
- Admin can stop the machine.

```
*****************************************
*         Welcome to Vending Machine
*    1.Add items         2.View Items
*    3.Delete items      4.Search Items
*    5.Check sale        6.Start Machine
*    7.Stop Machine
*
*****************************************
|
```

Add and view items

- Admin can add different items by entering 1 in the prompt.

- Admin can view all the items by entering 2 in the prompt

```
2

------------------------------------------------
Item id          :      2000
Items Name       :      Sprite
Price            :      25
Qty              :      100.0
Stock            :      100.0

------------------------------------------------
Item id          :      2001
Items Name       :      Coca-Cola
Price            :      28
Qty              :      100.0
Stock            :      100.0

------------------------------------------------
Item id          :      2002
Items Name       :      Marinda
Price            :      30
Qty              :      100.0
Stock            :      100.0
```

Search Items

- Admin can search any items by entering 4 in the prompt and providing the id of the items.

```
*******************************************
*        Welcome to Vending Machine
*    1.Add items        2.View Items
*    3.Delete items     4.Search Items
*    5.Check sale       6.Start Machine
*    7.Stop Machine

*******************************************
4
Enter id
2000

-------------------------------------------
Item id        :    2000
Items Name     :    Sprite
Price          :    25
Qty            :    100.0
Stock          :    100.0
```

Check Sale

- Admin can check the sale of his items and know about the profit and number of items sold.

```
***********************************************
*          Welcome to Vending Machine         *
*     1.Add items          2.View Items        *
*     3.Delete items       4.Search Items      *
*     5.Check sale         6.Start Machine      *
*     7.Stop Machine                            *
***********************************************
5

---------------------------------------------
Number of bought items   :     300.0
Total Stock                    :      296.0
Number of items Sold     :     4.0
Total Investment                    :      7500.0
Total Profit                        :      100.0

---------------------------------------------
```

Start the Machine

- Admin will start the machine so that the customers can buy the items.

- Customer will be asked to enter cash, choice and quantity of the selected item.

```
-------------------------------------
        Vending Machine
Enter cash
100
Following items are available

-------------------------------------
Item id       :    2000
Items Name    :    Sprite
Price         :    25
-------------------------------------
Item id       :    2001
Items Name    :    Coca-Cola
Price         :    28

-------------------------------------
Item id       :    2002
Items Name    :    Marinda
Price         :    30
Enter choice
2000
Enter quantity
1
Do you want to buy Y/N
y
```

Detailed Bill receipt

- A detailed bill will be provided to the customer after the transaction is performed

```
Item dispensed!
***********************************************************
Item id        :    2000
Items Name     :    Sprite
Price          :    25
quantity       :    1
Total bill     :    25.0
Balance        :    75.0

***********************************************************
```

File based Record

- After the admin turn off the machine. A file named "Vending Machine.txt" be created containing the record of all the transaction performed.

- It will be a permanent record for the admin.


```
Vending Machine - Notepad
File  Edit  Format  View  Help
Vending Machine
Start    :           18:02:56.457 2020-09-05
Location         :             GCU,Lahore
_____
Item id          :           2000
Items Name       :           Sprite
Price            :           25
Qty              :           100.0
_____
Item id          :           2001
Items Name       :           Coca-Cola
Price            :           28
Qty              :           100.0
_____
Item id          :           2002
Items Name       :           Marinda
Price            :           30
Qty              :           100.0
_____
                    Sale Record
_____
Customer Number  :           1
Price entered    :           100.0
Choice           :           2000
Quantity         :           1
Total Bill       :           25.0
_____
Machine Stop     :           18:11:58.437 2020-09-05
```

THANK YOU

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