**PROBLEM STATEMENT**

*Smart book-coffee is a management system for staffs to manage the book-coffee shop with these following functions:*

* **Order management:**
* All check-outs will be done at reception counter.
* Drinks/dishes, borrow and return books is ordered at reception counter.
* The app exports menu with drinks/dishes and books that are ***available at that time*** and bills.
* When ordering, the app asks for related information & after ordering, the app confirms an order again and displays on the screen.
* Each bill will be saved independently with these categories below:
* Bill code (automatically generated)

Structure: ***<Transaction code><Date created><order number>***

*<Transaction code>*: a 6-letter string in form of *AAAABC*, in which

AAAA: types of bill: DIOR: Dish Order

BBST: Book borrowed in store

BBAH: Book borrowed at home

BROS: Book returned on schedule

BROD: Book return overdued

B: customer: V: VIP customer

R: Regular customer

C: checking vouchers Y: voucher

N: no voucher

*<Date created>*: DDMMYY

*<Oder number>*: 4-digit number

* Drinks/Dishes (for dishes/drink orders)
* Books & codes (for book orders)
* Price (each item & total)
* Customer’s total payment & change
* Name of in charge cashier
* Date that bill is created & exported
* Customer’s information (if VIP)
* Waiting number (customers will be called using this number when staffs complete the order)
* Shop’s default information (name, address and contact)
* Previous borrow order (for return book order)
* Codes of borrowed and returned books (for return book order)
* Promotion codes
* Bills’ status

There will be *2 types of bills*: Drinks/Dishes and Borrowed/Return books.

After being created, bills will be automatically moved to the “queue” and displayed as *“Processing”*. Other staffs can view bills that are being in the “queue” but don’t have the right to create or cancel any bill. Staffs can also use the search function to search for “Processing” order based on customer’ ID, order ID or waiting number

When customers have their order completed, cashier will update the bill from *“Processing”* into *“Completed”* and move it to *Sold* folder in *Transaction History* or *Borrowed or Returned* folder in case of books. Customers can have cashier cancel their bill within 5 minutes from ordering. The cashier will change the bill status into *“Cancelled”* and move it to *Cancelled* folder in *Transaction History.*

Vouchers can be applied when the shop has *promotions*. The shop also has promotion using vouchers, which means customers can have vouchers from anywhere and bring them to the shop to get discounts (not for books).

Shop manager is in charge of launching promotions on the app in form of: *Promotion types (discount x%, buy A get B, buy 2 get 1.) and the amount of vouchers*. After completing the form, the system will automatically create a PDF file (with vouchers), print it (staffs will be in charge of printing it, the app doesn’t interact with printer) and save the voucher codes (random 5 character (digits or letters)) to the system for future use.

Books borrowed at home **ONLY** applies for VIP guests (see more in VIP Guest Management).

* **Menu Management:**

Staffs can use the app to view lists and details of drinks/dishes served in that day as well as search for items in menu based on name. The app will display detail information of drinks/dishes such as: name, ingredients, price, status (available/out of stock) and notes.

With every bill created, ingredients is automatically updated by the system and show notifications to warehouse manager whether any drinks/dishes are out of stock.

Moreover, the warehouse manager is also in charge of adding or updating, deleting menu whenever the shop needs to. Items that are temporarily out of service or officially out of service will not be displayed on menu.

* **Book Management:**

Staffs can use the app to view book lists, details as well as search for books required by customers to see information or check whether they are available or not.

The app will display: Book code, title, author, publish date, publisher, price, status (available/borrowed) and the location where that book is placed in shop. ***Each book has a distinct code even if they are the same.***

Customers can recommend the shop to update new books by talking to the cashier or manager, then they will add them into a *Wishlist* folder.

Cashiers also have the right to add, edit and delete *Wishlist* while other staffs can only search and view this *Wishlist*.

Warehouse manager is in charge of adding and updating books’ information when new books are imported.

Book status will be automatically updated by the system while books are being borrowed or returned.

* **VIP Guest Management:**

Customers can become VIP memebers (3 bills within 15 days) to have these benefits:

* Borrow books (for home-reading)

Customers **MUST** pay a deposit fee equals to **50%** of the price. After 7 days, books are considered as overdued. Days of overdue is also counted.

***Return fee = deposit fee – number of overdued days \* overdue fee*** (Overdue fee depends on price of that book)

|  |  |
| --- | --- |
| Price | Overdue fee |
| < 300.000đ | 2.000đ |
| 300.000đ – 700.000đ | 4.000đ |
| > 700.000đ | 7.000đ |

* Get discount on each bill (5%)
* Get promotion on special occasions and holidays.
* Get 1 voucher if check-out every 5 times.

(Shop manager can change these rules based on the shop’s needs)

Customers want to **maintain** as VIP members **MUST** satisfy the condition that is ***having at least 1 order above X VND for each 10 days.***

Customers can go to reception counter to register an account. They need to provide name, phone number, address, Civilian ID number, gender and occupation. Then, they will receive a member card with ID *(this ID is stored in the system along with register date, VIP status. VIP days left are aslo stored).* Cashier will be in charge of input these information into the system.

Staffs are allowed to view customers’ information or search for a specific customer based on his/her basic information but **ONLY** cashiers can update that information when customers ask to.

* **Staff Management:**

Staffs can search for their own basic information and working shifts.

Shop manager is allowed to search for employees’ information based on name, civilian ID, phone number, address or update employees’ information (if needed), view working shifts as well as organize working shifts for each staff.

Staff lists can be added, updated but **NOT** deleted.

The app displays staffs’ information including name, gender, main occupation,civilian ID number, address, phone number, total working hours, present positon and salary, status (working/not working/quitting) and notes.

Staff who does not have shift on that day or leave early or sudden sickness is considered as *“Not working”.*

Staff who works on that day is considered as *“Working”.*

Staff who does not have shift on that day but come to work will be added to list and considered as *“Working”.*

* **Stock Management:**

Stock receiving/delivering has their own type of bills that are different from selling bills. Each bills **MUST** have these information:

* Code (***STOCKSddmmyy<ordering number>***)
* Types of items
* Quantities
* Price
* Manufacturer
* Name of warehouse manager (created the bill)
* Stock receiving/delivering time
* Total payment & change

Warehouse managers are in charge of updating these information or canceling if there are any mistakes happen.

For each items (ingredients, books), the warehouse manager must add the item into the system before creating order.

Warehouse managers will be in charge of adding or updating ingredient & book information (for books, see Book Management) in the system. Ingredient’ information include name & description

Stock receiving/delivering bills are exported and moved to *Stock* folder in *Transaction History.* After that, the items in stocks will be automatically updated.

Staffs can view or search for the items in the warehouse.

* **Transaction Management:**

Orders (all the information of the shop activities) that are completed are save in *Sold*, *Cancelled*, *Borrowed*, *Returned*, and *Stock* folders.

Staffs can view or search for bills based on date, time, name of in charge staffs, manufacturers, codes, customers’ names or table number. Managers can also print these information and do some statistics on transactions, stock receiving/delivering, customers, etc (updated later).

* **Contact Information:**

Saving contact information of all manufacturers, managers, employees, and calling, messaging through connection with Zalo, Skype, etc.

**SUMMARY**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Order | Menu | Book | Guest | Staff | Stock | Transaction |
| Regular employees | -View | -View  -Search | -View  -Search | -View  -Search | -View (ownself) | -View | -View  -Search |
| Manager | -Add promotion |  |  | -Edit | -View (all)  -Create schedule  -Search |  | -In thống kê |
| Warehouse Manager |  | -Create  -Update  -Delete | -Add  -Update |  |  | -Create bills  -Cancel bills |  |
| Cashier | -Create  -Update status  -Delete |  | -Add wishlist  -Update wishlist  -Delete wislist | -Add VIP  -Edit VIP |  |  |  |