Coffee Shop Management System

Overview

This project aims to create a comprehensive management system for a coffee shop, including functionalities for the admin (owner), staff, and customers. The system will be built using Java Tomcat, Servlets, MySQL, HTML, CSS, and JavaScript.

Roles and Responsibilities

1. Admin (Owner)

- Username/Password:

- Functions:

- CRUD operations on staff, items, and orders.

- View the complete list of staff, including details such as ID, name, role, and total working hours for the day.

- View the list of staff who are currently working.

- View the list of items that have been ordered, sold, and those still in stock.

2. Staff

- Username/ Password:

- Functions:

- Take customer orders.

- Access and update the database with order and bill information.

- Generate bills for customers.

3. Customer

- No login required.

- Functions:

- Place orders (add, remove, modify items).

- Send the order to the system for staff to update the bill.

- Print the bill for ordered items.

Database Design

The database consists of several tables to manage customers, orders, items, staff, and admin information. Below is the detailed schema:

Tables

1. Customer

Customer\_id NVARCHAR(100) PRIMARY KEY,

Customer\_name NVARCHAR(100) NOT NULL,

Customer\_table INT,

Customer\_giveOrder BIT,

Customer\_payment BIT

2. Order

Customer\_id NVARCHAR(100),

Item\_id NVARCHAR(100),

Order\_quantity INT,

Order\_responsive NVARCHAR(100),

Order\_date DATETIME DEFAULT GETDATE(),

Order\_billStatus BIT,

FOREIGN KEY (Customer\_id) REFERENCES Customer(Customer\_id),

FOREIGN KEY (Item\_id) REFERENCES Item(Item\_id)

3. Item

Item\_id NVARCHAR(100) PRIMARY KEY,

Item\_name NVARCHAR(100),

Item\_price NUMERIC(10, 3),

Item\_picture NVARCHAR(100),

Item\_type NVARCHAR(100)

4. Manager

Manager\_name NVARCHAR(100),

Manager\_user NVARCHAR(100),

Manager\_pass NVARCHAR(100)

5. Staff

Staff\_id NVARCHAR(100) PRIMARY KEY,

Staff\_name NVARCHAR(100),

Staff\_pic NVARCHAR(100),

Staff\_role NVARCHAR(100),

Staff\_user NVARCHAR(100),

Staff\_pass NVARCHAR(100),

Staff\_phoneNum VARCHAR(100),

Staff\_status BIT

Front-End Design

The front-end of the system will include several web pages:

1. Login Page

- For admin and staff to log in.

2. Customer Order Page

- For customers to place their orders.

3. Staff Order Management Page

- For staff to receive and manage customer orders.

4. Bill Generation Page

- For generating and printing bills.

5. Staff Information Page

- Display all staff information, including currently working staff and their details.

6. Daily Orders Page

- Display all orders placed during the day.

Back-End Implementation

The back-end will be implemented using Java Tomcat and Servlets. It will handle various operations such as:

- Authentication and Authorization: For admin and staff login.

- CRUD Operations: For managing staff, items, and orders.

- Order Management: For receiving, updating, and processing customer orders.

- Bill Generation: For generating and printing customer bills.

- Data Retrieval: For fetching and displaying staff and order details.

Key Features

1. Admin Dashboard:

- Manage staff details.

- Manage item details.

- View all orders.

- Track stock and inventory.

2. Staff Dashboard:

- Take and manage customer orders.

- Generate bills.

- Update order status.

3. Customer Interface:

- Place orders easily without logging in.

- Modify order items.

- Print the final bill.

Technologies Used

- Back-End: Java, Tomcat, Servlets, MySQL

- Front-End: HTML, CSS, JavaScript

Development Setup

1. Environment Setup:

- Install Java Development Kit (JDK)

- Install Apache Tomcat

- Set up MySQL database

- Configure the project in an IDE NetBeans Apache 13

2. Database Setup:

- Create the database and tables as per the schema provided.

- Insert initial data for testing.

3. Project Structure:

- Organize the project with separate packages for models, controllers (servlets), views (JSP), and utilities.

Conclusion

This document outlines the key components and functionalities of the coffee shop management system. By following this plan, the system can be developed efficiently to meet the needs of the coffee shop, ensuring a smooth and organized management process for the admin, staff, and customers.

|  |  |  |  |
| --- | --- | --- | --- |
| Phân chia công việc | | | |
| Tên | Task | Phần trăm đóng góp | Ghi chú |
| Lâm Tấn Phát | Admim, quản lý dự án\_repo-github | 25% |  |
| Lê Hữu Khoa | FE, Customer,… | 25% |  |
| Nguyễn Trọng Quý | FE, Staff,… | 25% |  |
| Nguyễn Thanh Bảo | Database, các truy vấn,.. | 25% |  |

Link repo\_github : https://github.com/LTPPPP/Caffe\_not\_final