

IIITD Canteen Management System

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Assignment Overview

This assignment consists of several classes that work together to create a Canteen Management System application. The following files are included:

1. **Item.java**: Defines the `Item` class representing food items available in the canteen, including attributes like name, price, category, and availability.
2. **Category.java**: An enumeration defining various categories of food items (e.g., Starters, Main Course, Desserts).
3. **Admin.java**: Implements the `Admin` class, which contains functionalities specific to the administrative role, such as adding and managing menu items.
4. **Canteen.java**: The main class responsible for initialising the canteen data, managing user interactions, and displaying the main menu to users.
5. **Main.java**: Contains the public `main` method, which serves as the entry point for the application and manages the overall flow of the canteen system.
6. Other files, like `Customer.java`, `Order.java` etc are also present.
7. Test Classes like `CanteenSystemTest.java` and `CustomerTest.java` are also present.

Initial Data

The application initialises with a set of food items hardcoded into the system, categorised by type. Each item has attributes such as name, price, category, and whether it is available for purchase.

Application Workflow

Upon launching the application, users are presented with options to enter or exit the canteen server. Users can interact with the application using a console-based menu system.

Assumptions

1. When the program starts, the date is set to the current date or the date from the file which was stored in IOHandling folder (which-so-ever is earliest).
2. When a new customer signs-up to the portal, they are given Rs 2000 in their wallet to attract more customers to the application.
3. Every 30 seconds, the date is advanced by one day.
4. Processing an order will take 2 seconds.
5. After an order is marked as "OutForDelivery," its status will automatically change to "Delivered" after 10 seconds.

Features

- **User Interaction:** Users can enter the canteen server or exit the application.
- **Menu Display:** Users can view available items categorised by their type.
- **Item Management:** The admin can add, update, and remove items from the canteen menu.
- **Search Functionality:** Users can search for items based on their categories.
- **Order Placement:** Students can place orders for food items, enhancing the ordering process.
- **User-Friendly Interface:** Console-based interface for intuitive navigation.

Installation

1. Ensure you have the Java Development Kit (JDK) installed on your machine.
2. You must have a valid IDE like IntelliJ in your machine.

Usage

1. Launch the application.
2. Choose to enter the server or exit.
3. Follow the prompts to interact with the canteen, view menu items, and manage orders.

Technologies Used

- Java as a programming language
- Collections Framework
- Object-Oriented Programming Concepts

Additional Features Implemented

- No two customers are allowed to register with the same email address.
- Users can recover their passwords if they forget them.
- Upon logging into their portal, users will be presented with relevant notifications.
- The admin has the ability to modify the VIP membership fee.
- Users can access items by typing only the prefix of the item name rather than the full name.
- When a user enters their password, their password is saved in the system as encoded version for security enhancement.
- Additional screens implemented in GUI.

Initial Data

- Two customers are already instantiated with following Email IDs

- ordinary@iiitd.ac.in
 - extraordinary@iiitd.ac.in
- Password for both the accounts is: password
- Details of already instantiated admin:
 - Email ID: admin@iiitd.ac.in
 - Password: password123