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**Lab Assignment #4**

**Submitted to: Professor SHAHID BHATTI**

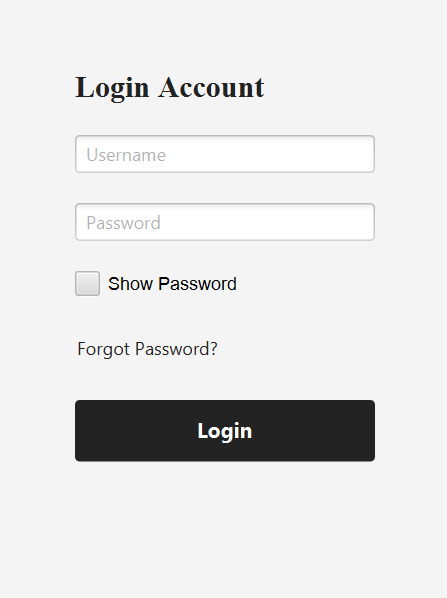
**Submitted by:**

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**Food Ordering and Management Application**

**Overview:**

The Cafe Shop Management System is a JavaFX application designed to handle **login**, **registration**, and **password recovery forms**. It uses the **AccountManager** class for user authentication and account management, and a **Dashboard** class for displaying features. It has external CSS for styling the app.

**Login Form**

* Allows existing users to log in.
* Validates user credentials.
* Toggles password visibility.
* Check if the fields are empty or not
* Hovering effect for **Login** button through **CSS**

**createLoginForm()**

* **Components:**
  + **TextField** for username input.
  + **PasswordField** for password input, with dynamic visibility toggle.
  + **CheckBox** to toggle password visibility.
  + **Hyperlink** for password recovery.
  + **Button** to initiate login.

### **Registration Form**

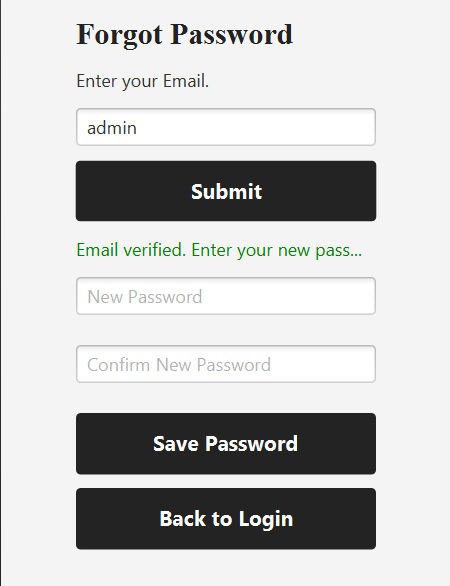
### **createRegisterForm** ()

* **Components:**
  + **TextField** for username and email input.
  + **PasswordField** for password and confirmation input, with visibility toggle.
  + **CheckBox** to toggle password visibility.
  + **Button** to register a new account.
  + **Label** to display validation messages.
* **Functionality:**
  + Validates username, email, and password fields.
  + Ensures password strength and matching.
  + Uses **AccountManager**.**register()** to create a new account.

**Password Recovery Form**

**createForgotPasswordForm()**

* **Components:**
  + **TextField** for email input.
  + **TextField** for new password and confirmation input, with visibility toggle.
  + **Button** to submit email for verification and save the new password.
  + **Label** to display validation and success messages.
* **Functionality:**
  + Verifies email with AccountManager.isEmailRegistered().
  + Allows password update using AccountManager.updatePassword().
  + Validates new password strength and matching.



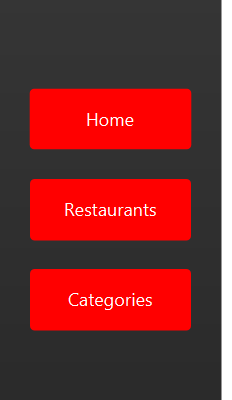
**Dashboard**

* Manages the layout and transitions between the home, restaurant, and order views.
* Implements multiple VBox containers for logical organization of UI elements.
* Utilizes TableView to manage and display the order summary.



**showDashboard()**

* **Purpose:** Initializes and displays the main dashboard.
* **Components:**
  + HBox for the top bar containing the application title and logo.
  + VBox containers (vBox1, vBox2, vBox3, showRestaurant) for managing different sections.
  + TilePane for item layout.

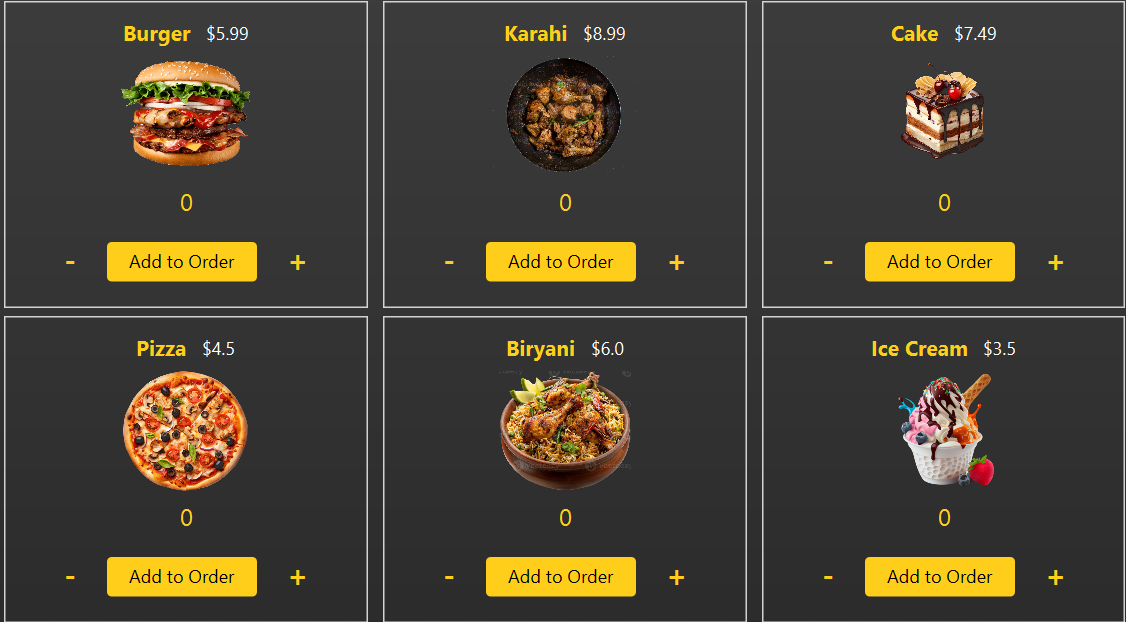


**setupVBox1()**

* **Purpose:** Configures the navigation menu with buttons for Home, Restaurants, and Categories.
* **Components:**
  + Buttons styled with CSS classes and assigned action handlers to toggle views.

**Navigation Bar (VBox1)**

* Contains buttons for navigation:
  + **Home Button:** Switches to the main item grid view.
  + **Restaurants Button:** Displays the restaurant listings.
  + **Categories Button:** (Future use).



**setupVBox2()**

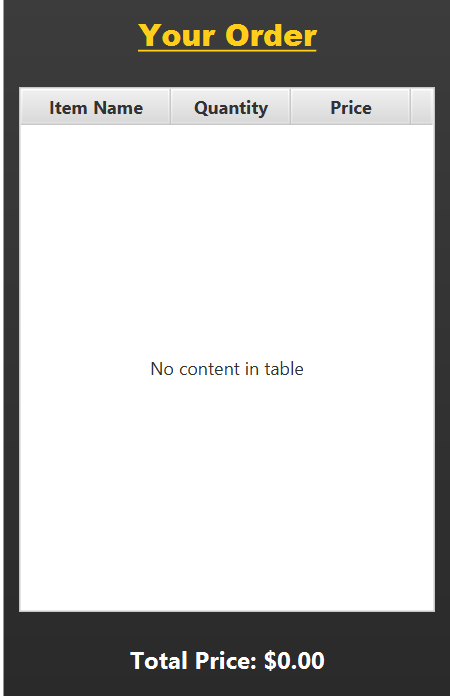
* **Purpose:** Sets up the item grid using TilePane.
* **Components:**
  + Displays items with images, names, prices, and quantity controls.
  + Adds functionality for adding items to the order.

**addItemToTable(String itemName, int quantity, double itemPrice)**

* **Purpose:** Adds an item to the order table or updates an existing item’s quantity and price.
* **Logic:**
  + Checks for existing items in the table before adding or updating.
  + Dynamically updates the total price.

**Item Grid (VBox2)**

* **Layout:** Uses TilePane for a flexible grid display.
* **Components:**
  + **ImageView:** Displays the item image.
  + **Name and Price Labels:** Show item details.
  + **Quantity Controls:** Includes "+" and "-" buttons for customization.
  + **Add to Order Button:** Adds selected items to the order table.

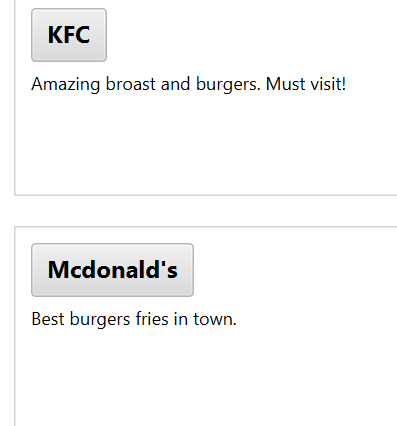


**setupVBox3()**

* **Purpose:** Configures the order summary table and calculates the total price dynamically.
* **Components:**
  + TableView with columns for item name, quantity, and price.
  + A total price label updated on table changes.

**Order Summary (VBox3)**

* **Layout:** Uses TableView to display order details.
* **Columns:**
  + Item Name
  + Quantity
  + Price
* **Dynamic Updates:** Automatically recalculates total price as items are added or modified.
* **Enhancements:**
  + Designed for easy integration with payment systems.

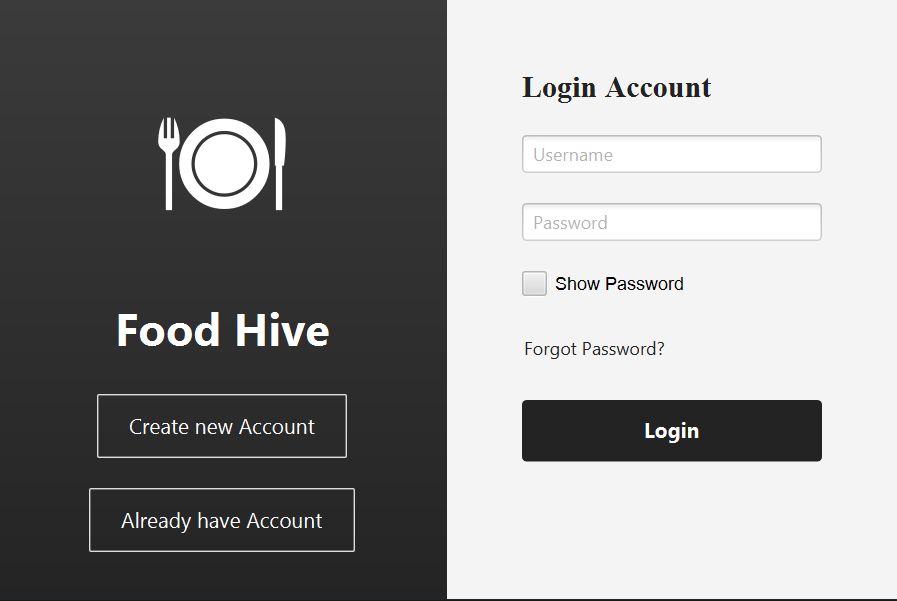


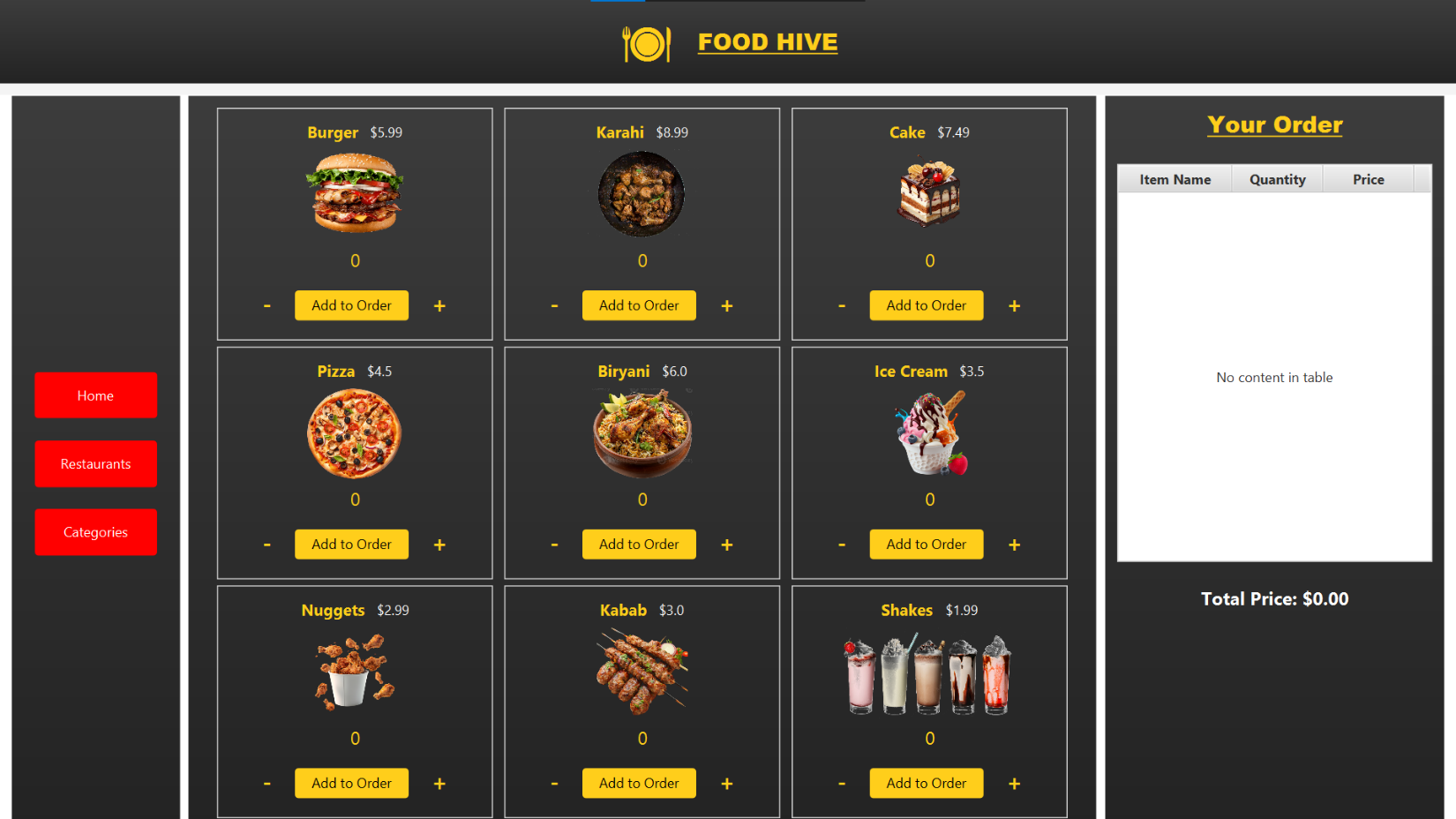
**showRestaurants()**

* **Purpose:** Displays a list of restaurants with their names, descriptions, and images.
* **Components:**
  + VBox for restaurant details.
  + Action handlers for navigating to restaurant-specific details (future enhancement).
  + Includes placeholder images and error handling for missing resources

**Restaurants View (showRestaurant)**

* Displays a list of restaurants with:
  + Name (Button).
  + Description (Label).
  + Future functionality for restaurant-specific navigation.
  + Placeholder for ratings or user reviews.

**Login Form**

**Dashboard**