FAST NUCES - ISB

DATABASE SYSTEM PROJECT

CAFE MANAGEMENT SYSTEM

4TH SEMESTER

BS(SE)

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Functional Requirements:

1. Order Placement:

- Customers should be able to browse the menu and select items they wish to order.

- The system should support customization of items (e.g., selecting size, adding toppings).
- Customers should be able to add multiple items to their order.
- The system should display a summary of the order before final confirmation.
- Customers should have the option to modify or remove items from their order before finalizing.

2. Payment Processing:
- Integration with payment gateways to facilitate secure online payments.
- Support for various payment methods such as credit/debit cards, mobile wallets, and cash on delivery.
- Automatic calculation of total order amount including taxes and any applicable discounts.
- Confirmation of payment status upon successful transaction.

3. Order Tracking:
- Customers should be provided with a unique order ID for tracking purposes.
- Real-time updates on the status of the order, including preparation, ready for pickup, or delivery.
- Notifications to customers regarding order status changes via email or SMS.

4. Order Fulfillment:
- Integration with kitchen display systems (KDS) to relay orders to the kitchen staff.
- Prioritization of orders based on time of placement and urgency.
- Support for order batching to streamline kitchen operations.
- Verification of order completeness before marking it as fulfilled.

5. Order History and Reordering:
- Logged history of past orders for registered customers.
- Customers should be able to view details of past orders including items, prices, and order status.
- Option for customers to reorder from their order history with a single click.

6. Promotions and Discounts:
- Application of promotional offers and discounts based on predefined rules (e.g., time-based promotions, loyalty discounts).
- Automatic calculation of discounted prices during order placement.
- Display of applicable promotions and discounts to customers during checkout.

7. Inventory Management Integration:
- Real-time inventory updates upon order placement to ensure accurate stock levels.
- Automatic deduction of items from inventory upon order fulfillment.
- Alerts for low stock levels to trigger replenishment processes.

8. Order Cancellation and Refunds:
- Capability for customers to cancel orders within a specified timeframe.

- Automatic refund processing for canceled orders, if applicable.
- Notification to customers regarding successful order cancellation and refund status.

9. Order Analytics and Reporting:

- Capture and analysis of order data for insights into popular items, peak ordering times, and customer preferences.
- Generation of reports on order volume, revenue, and average order value.
- Visualization of order data through charts and graphs for easy interpretation by management.

10. Accessibility and Usability:

- Intuitive user interface for seamless order placement and management.
- Accessibility features to accommodate users with disabilities.
- Support for multiple languages and localization options.

11. User Roles and Permissions:

- Differentiate between roles such as baristas, cashiers, managers, and administrators.
- Assign appropriate permissions to each role based on their responsibilities and access needs.
- Admins should have the authority to manage user roles and permissions.

12. User Registration and Authentication:

- Ability to add new staff members to the system with relevant details (e.g., name, contact information, role).
- Secure authentication mechanisms (e.g., username/password, biometric authentication) for staff login.
- Password management features such as password reset and account lockout.

13. Shift Scheduling and Management:

- Create and manage shifts for staff members based on business hours and staffing requirements.
- Assign staff to specific shifts considering their availability, skills, and workload distribution.
- Ability to view and adjust the shift schedule dynamically based on changing needs or staff availability.

14. Attendance Tracking:

- Record and track staff attendance including clock-in and clock-out times.
- Support for manual entry of attendance data in case of system downtime or technical issues.
- Calculation of working hours and overtime based on attendance records.

15. Task Assignment and Management:

- Assign tasks to staff members based on their roles and capabilities.
- Prioritize tasks based on urgency and importance.
- Track the progress of assigned tasks and monitor completion status.

16. Training and Development:

- Record and track staff training sessions, certifications, and skills.
- Schedule and manage training programs to enhance staff knowledge and proficiency.
- Evaluate staff performance and identify areas for improvement through training initiatives.

17. Communication and Collaboration:

- Provide a platform for internal communication among staff members (e.g., messaging, announcements).
- Facilitate collaboration on tasks and projects through shared documents or task boards.
- Integration with email or messaging services for notifications and alerts.

18. Performance Evaluation and Feedback:

- Conduct regular performance evaluations for staff members.
- Define performance metrics and evaluation criteria aligned with organizational goals.
- Provide feedback to staff members based on performance assessments to encourage improvement.

19. Leave and Time-off Management:

- Allow staff to request leave or time off through the system.
- Approval workflow for leave requests with notifications to relevant parties.
- Maintain records of staff leave balances and entitlements.

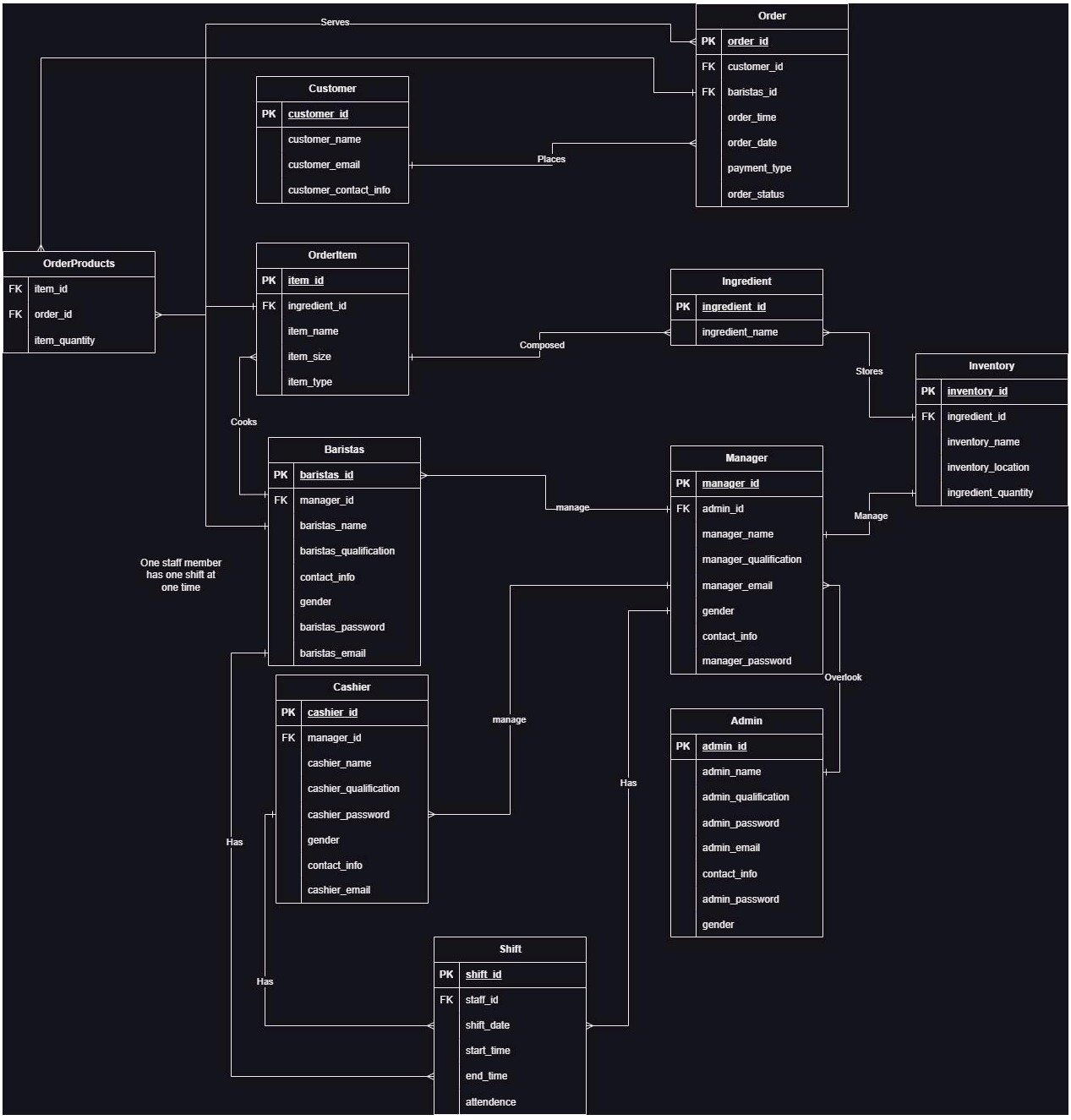
20. Safety and Compliance:

- Ensure staff compliance with health and safety regulations.
- Provide training materials and resources on safety protocols and procedures.
- Regular audits and inspections to ensure adherence to compliance standards.

21. Payroll Integration:

- Integration with payroll systems to streamline salary calculations and disbursements.
- Automatic generation of payroll reports based on attendance and working hours data.

ERD: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customer_contact_info
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item_quantity
OrderItem
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FK ingredient_id
item_name
item_size
item_type
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Ingredient
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ingredient_name
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Inventory
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baristas_name
baristas_qualification
contact_info
gender
baristas_password
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manager_qualification
manager_email
gender
contact_info
manager_password
Manage
One staff member has one shift at one time
Overlook
Cashier
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cashier_qualification
cashier_password
gender
contact_info
cashier_email
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admin_password
admin_email
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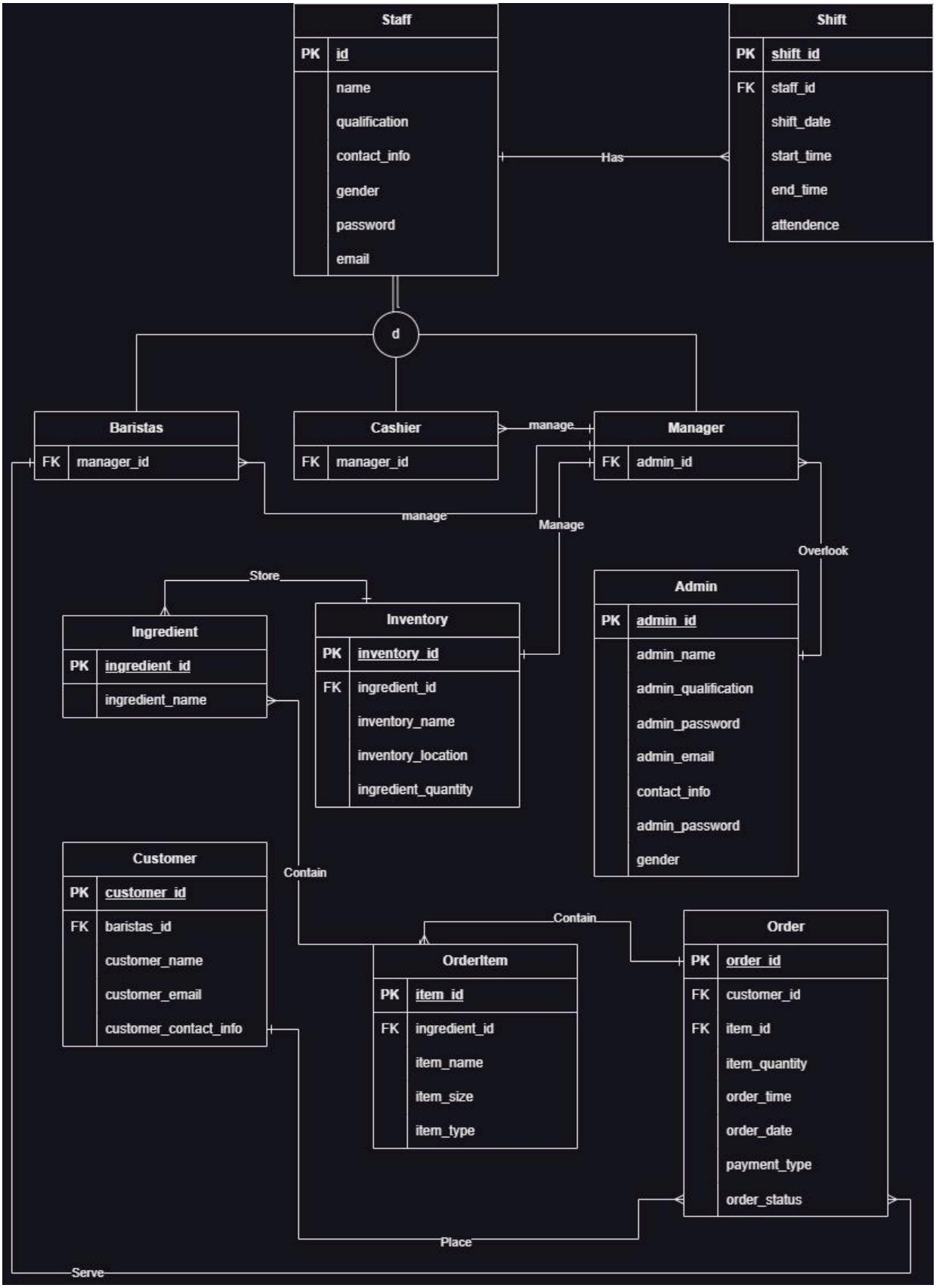
start_time
end_time
attendence

EERD: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end_time
attendence
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Cashier
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manage
Manager
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manage
Manage
Overlook
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Inventory
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inventory_name
inventory_location
ingredient_quantity
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customer_email
customer_contact_info
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Contain
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item_name
item_size
item_type
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FK customer_id
FK item_id
item_quantity
order_time
order_date
payment_type
order_status
Place
Serve

User Documentation and Help:

1. Getting Started

Before you begin using the Cafe Management System, ensure that you have been provided with the necessary login credentials by the system administrator. If you encounter any difficulties accessing the system, please reach out to your supervisor or the system administrator for assistance.

2. User Roles

Admin: The admin has full control over the system and can manage user accounts, inventory, orders, and other administrative tasks.
Manager: Managers have access to manage staff, inventory, and view reports related to their assigned cafe branch.
Cashier: Cashiers can process customer orders, manage transactions, and handle payments.
Barista: Baristas are responsible for preparing and fulfilling customer orders according to the specifications provided.

3. Navigation

Once logged in, users will be greeted with a dashboard tailored to their specific role. From the dashboard, users can access various modules and features using the navigation menu located on the left-hand side of the screen. Each menu option is categorized based on its functionality for easy navigation.

4. Functionality

Managing Orders: Cashiers and baristas can view and process customer orders from the "Orders" module. They can update order status, view order details, and mark orders as completed once fulfilled.

Managing Inventory: Managers have the ability to add, update, and remove items from the inventory database. They can also track inventory levels and receive notifications for low stock items.

Reporting: Admins and managers can generate reports to analyze sales data, track inventory usage, and monitor employee performance. Reports can be customized based on specific criteria and exported for further analysis.

Help:

1. Admin Help:

Managing Managers: As an admin, you can add, edit, and remove managers from the system. Navigate to the "Manager Management" section to access these functions.
Viewing Reports: Use the "Reports" section to generate various reports such as sales reports, inventory reports, and employee performance reports.

System Settings: Access the "Settings" menu to configure system settings such as email notifications, access permissions, and database backups.

2. Manager Help:

Managing Employees: Managers can add, edit, and remove baristas and cashiers from the system. Use the "Employee Management" section to perform these actions.
Order Management: Track and manage incoming orders using the "Order Management" feature. Update

order statuses and view order history to ensure smooth operations.
Inventory Control: Monitor inventory levels and place orders for replenishment as needed. Navigate to the "Inventory Management" section to manage inventory items.

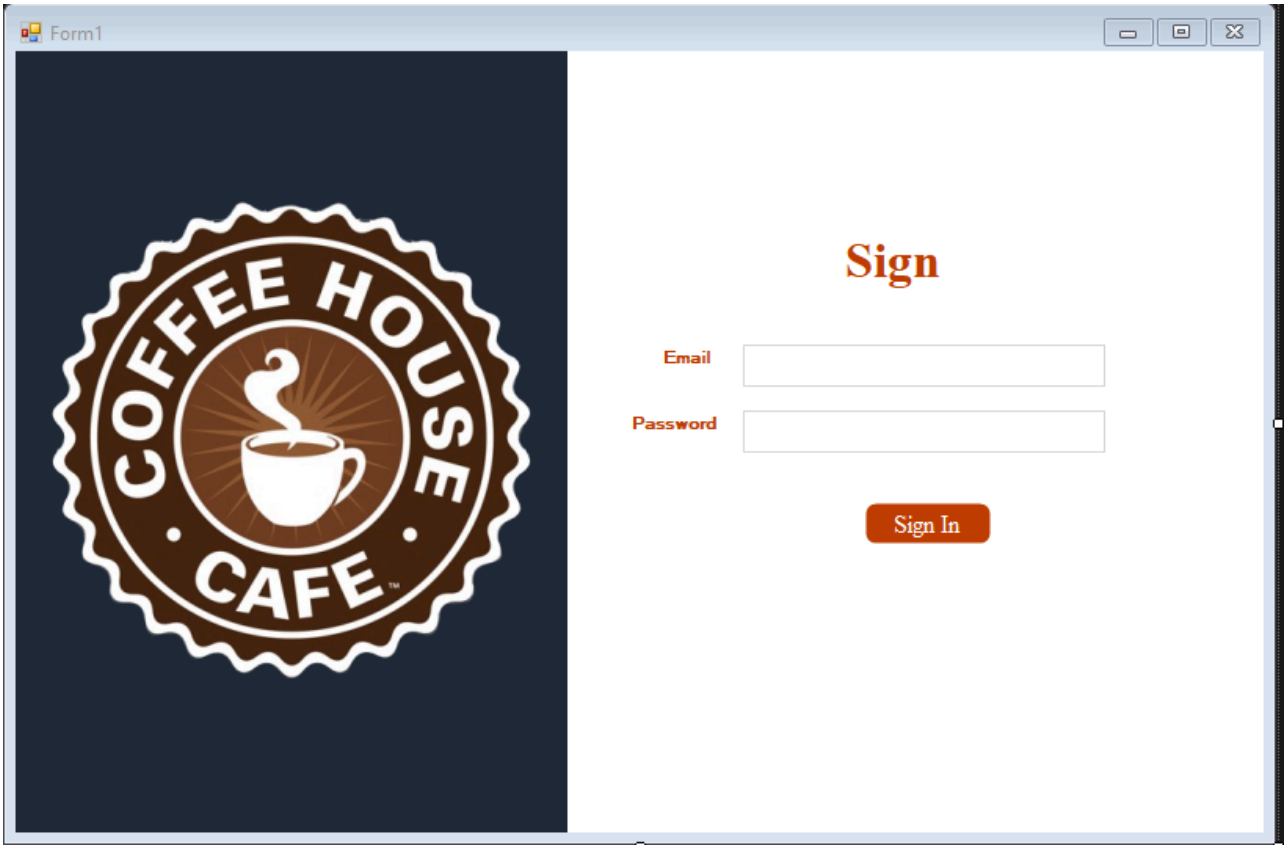
3. Cashier Help:

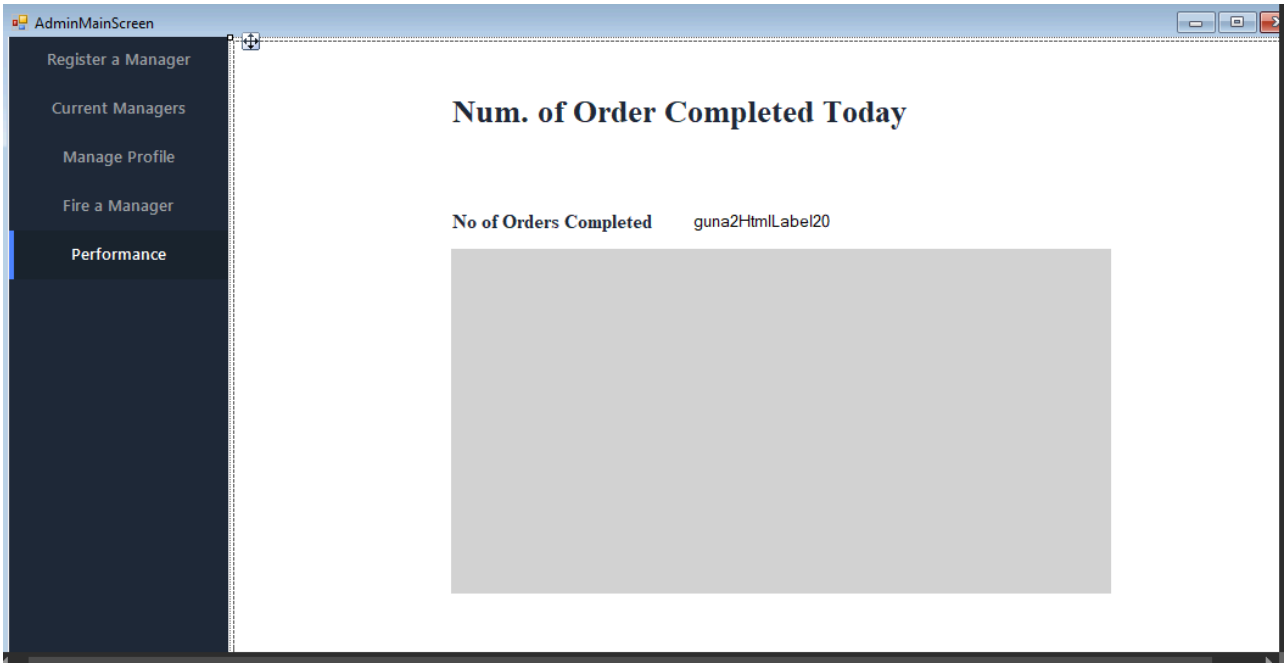
Processing Orders: Cashiers can view incoming orders, process payments, and update order statuses. Use the "Order Processing" feature to manage orders efficiently.
Customer Management: Maintain customer records and loyalty programs using the "Customer Management" section. Add new customers, update information, and track purchase history.
Sales Reporting: Generate sales reports and summaries to track daily, weekly, and monthly sales performance. Access the "Sales Reports" feature for detailed insights.

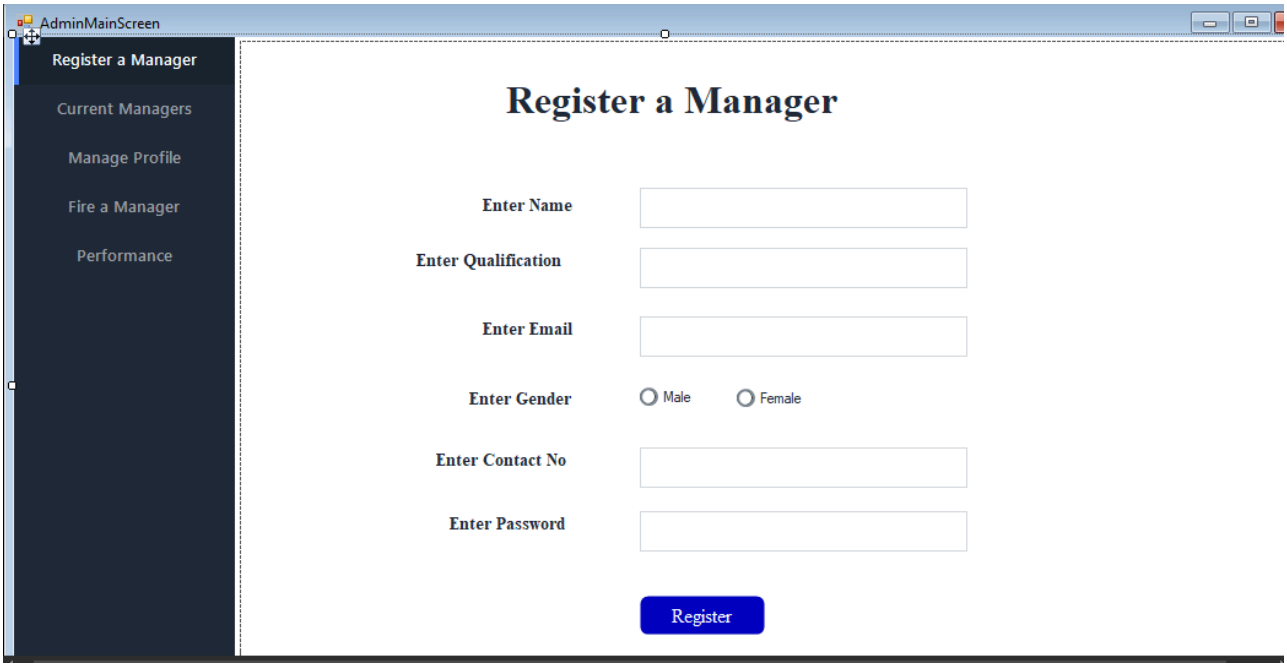
4. Barista Help:

Preparing Orders: Baristas are responsible for preparing and fulfilling customer orders. Use the "Order Queue" section to view pending orders and prepare items accordingly.
Inventory Usage: Ensure that inventory levels are maintained by accurately recording ingredient usage for each order. Update inventory counts as ingredients are used.
Shift Management: Clock in and out for shifts using the "Shift Management" feature. Record attendance and track working hours for payroll purposes.

System screenshots:



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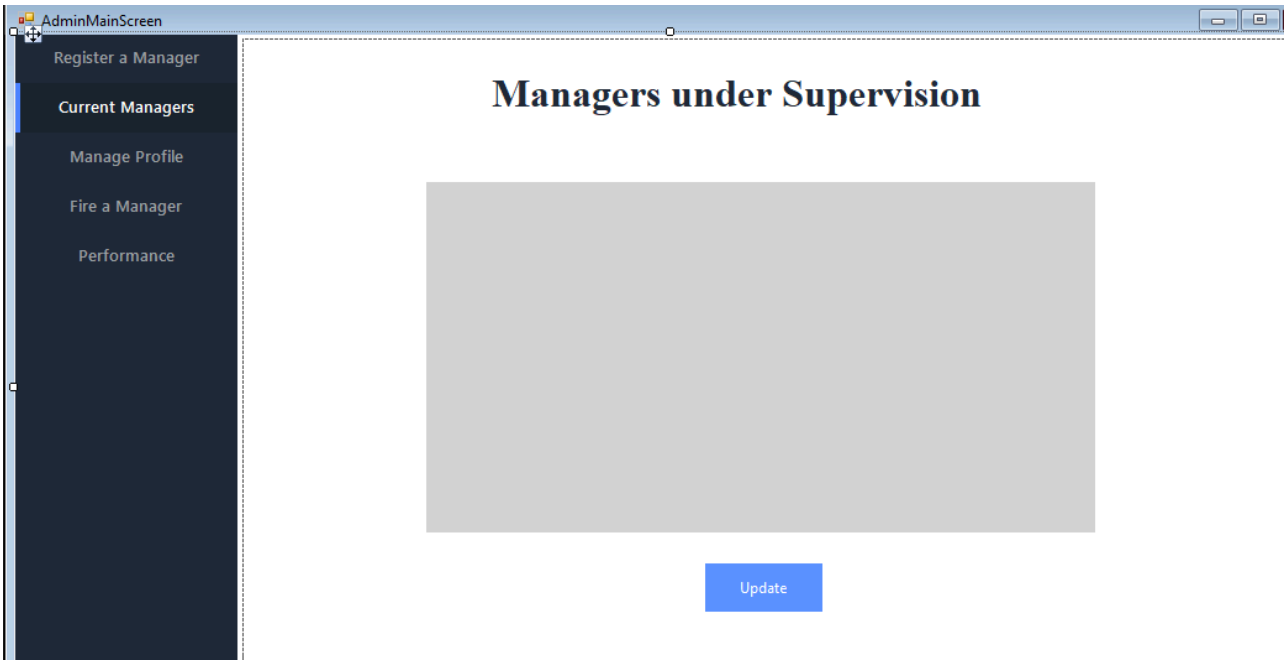
Register a Manager
Current Managers
Manage Profile
Fire a Manager
Performance
Register a Manager
Enter Name
Enter Qualification
Enter Email
Enter Gender
Male
Female
Enter Contact No
Enter Password
Register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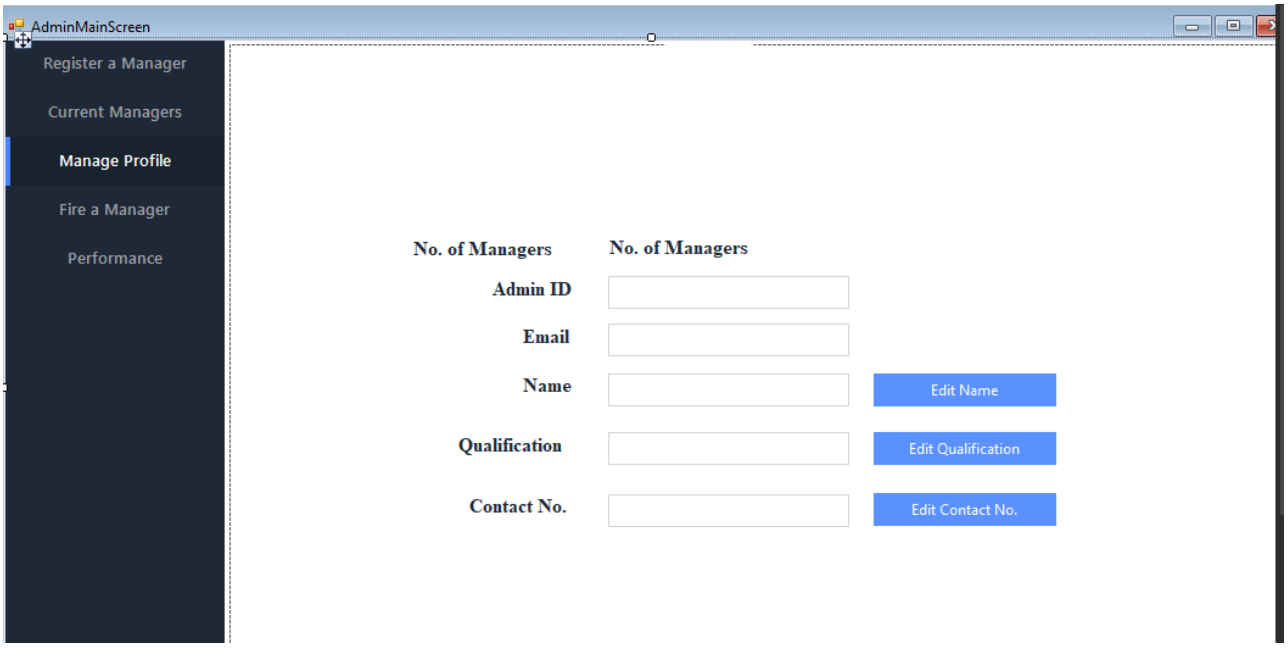
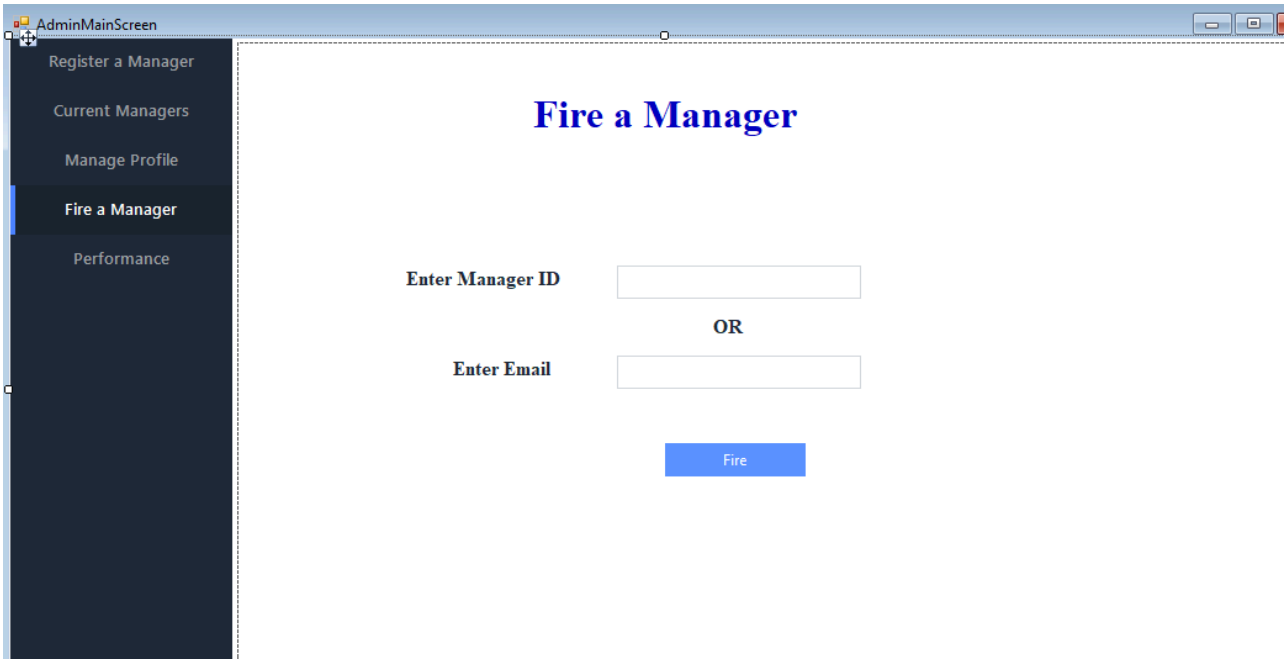
Register a Manager
Current Managers
Manage Profile
Fire a Manager
Performance
Managers under Supervision
Update


AdminMainScreen
Register a Manager
Current Managers
Manage Profile
Fire a Manager
Performance
No. of Managers
No. of Managers
Admin ID
Email
Name
Edit Name
Qualification
Edit Qualification
Contact No.
Edit Contact No.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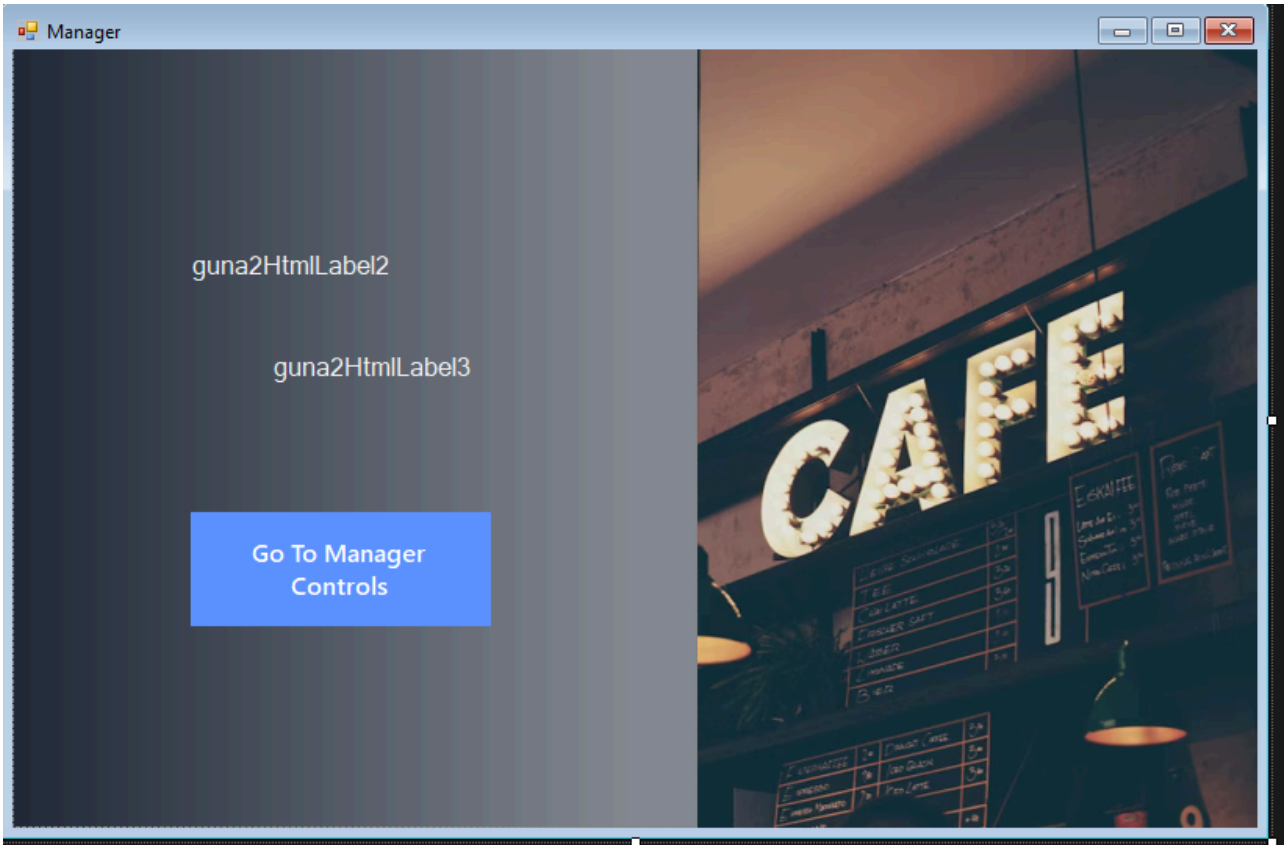
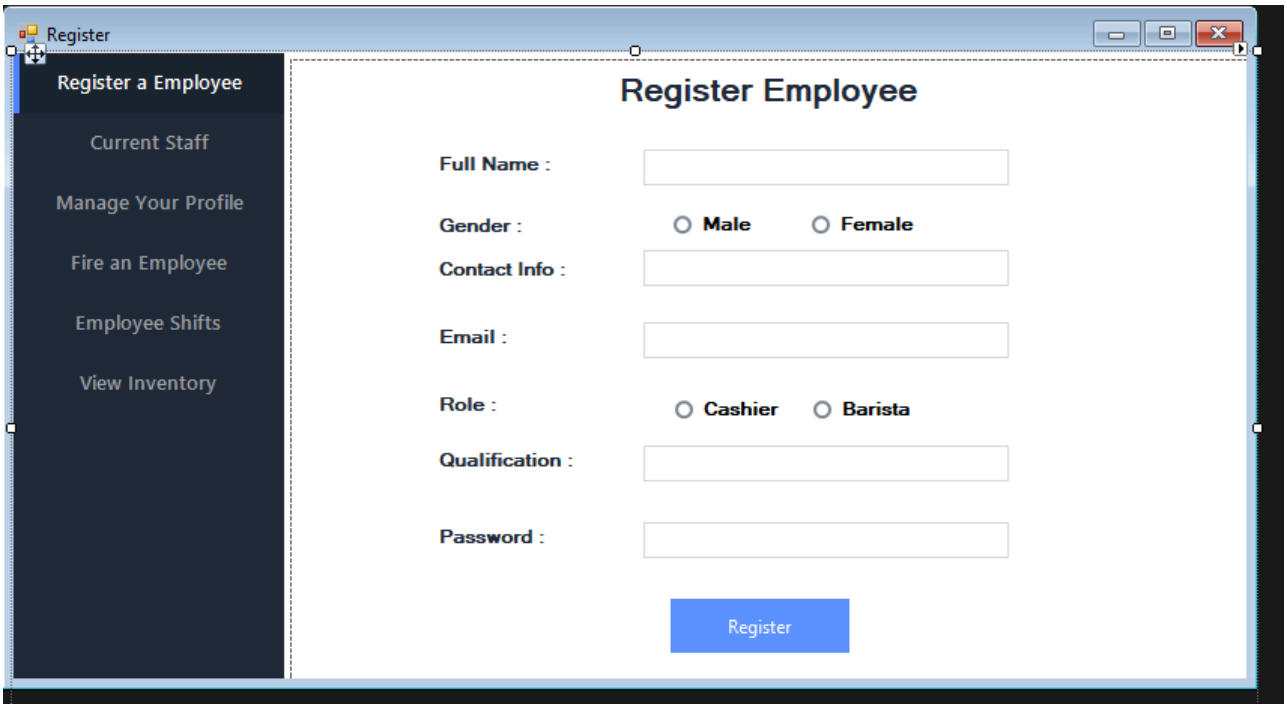
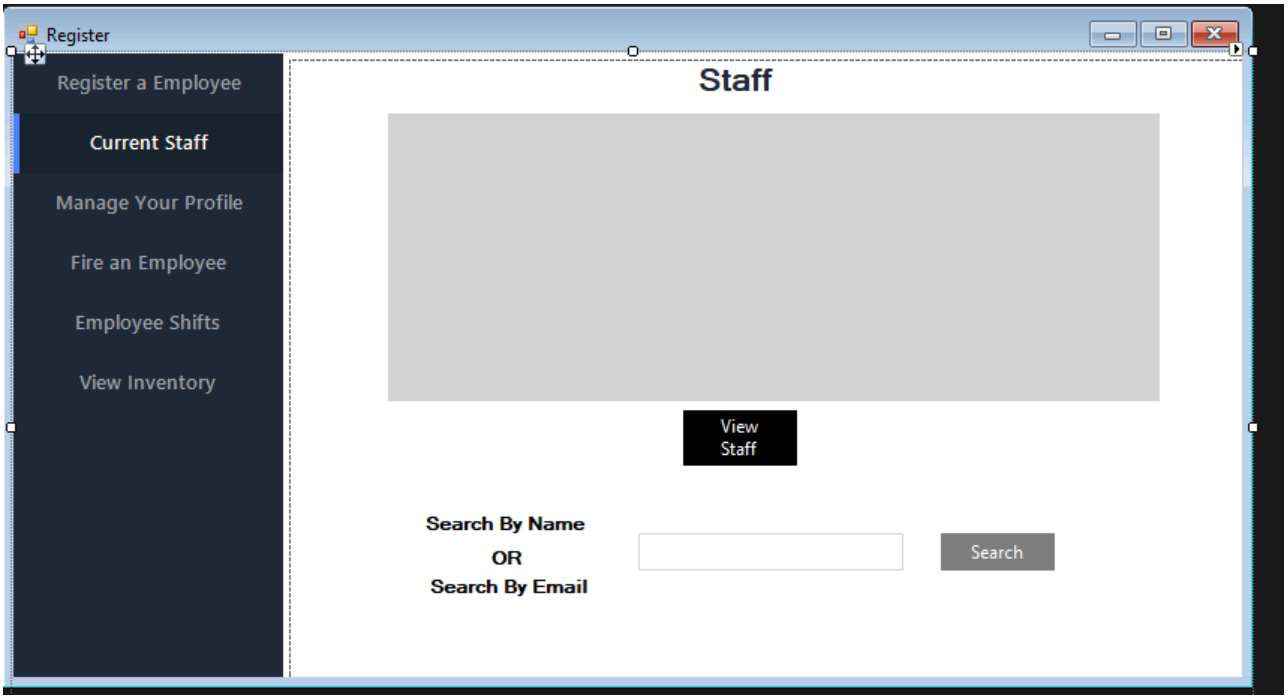
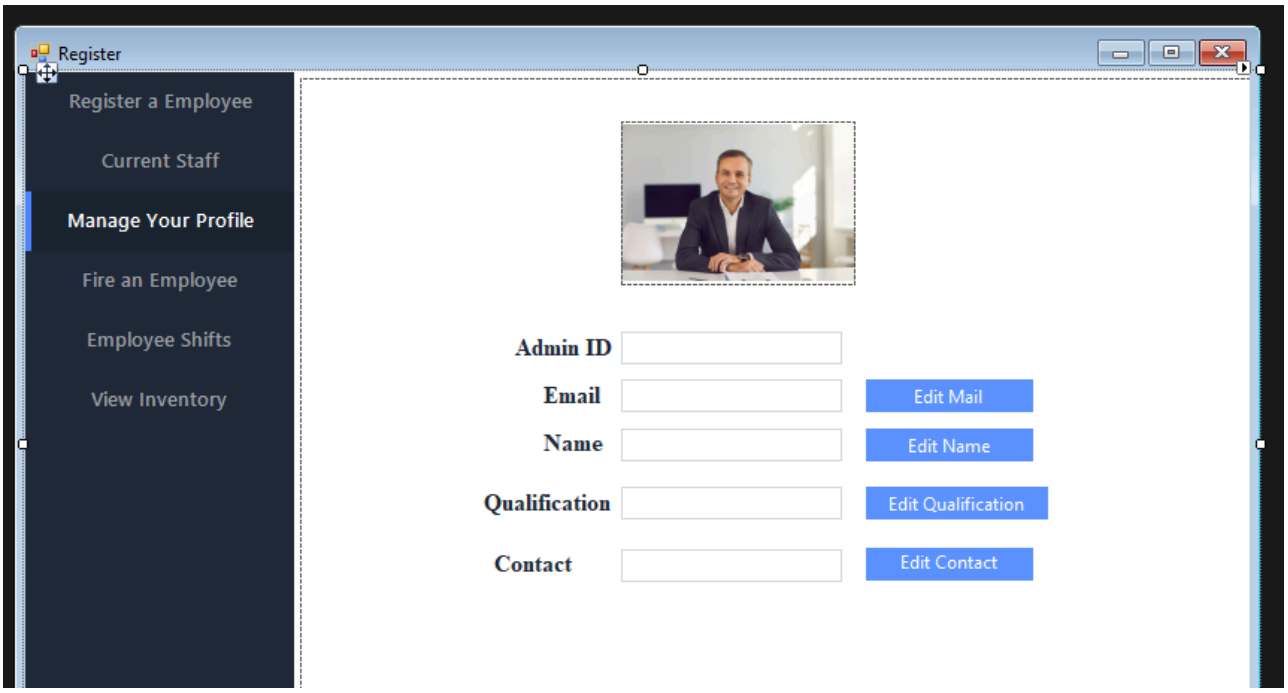
Register a Manager
Current Managers
Manage Profile
Fire a Manager
Performance
Fire a Manager
Enter Manager ID
OR
Enter Email
Fire


Manager
guna2HtmlLabel2
guna2HtmlLabel3
Go To Manager Controls
CAFE


Register
Register a Employee
Current Staff
Manage Your Profile
Fire an Employee
Employee Shifts
View Inventory
Register Employee
Full Name :
Gender :
Male
Female
Contact Info :
Email :
Role :
Cashier
Barista
Qualification :
Password :
Register


Register
Register a Employee
Current Staff
Manage Your Profile
Fire an Employee
Employee Shifts
View Inventory
Staff
View Staff
Search By Name
OR
Search By Email
Search


Register
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Current Staff
Manage Your Profile
Fire an Employee
Employee Shifts
View Inventory
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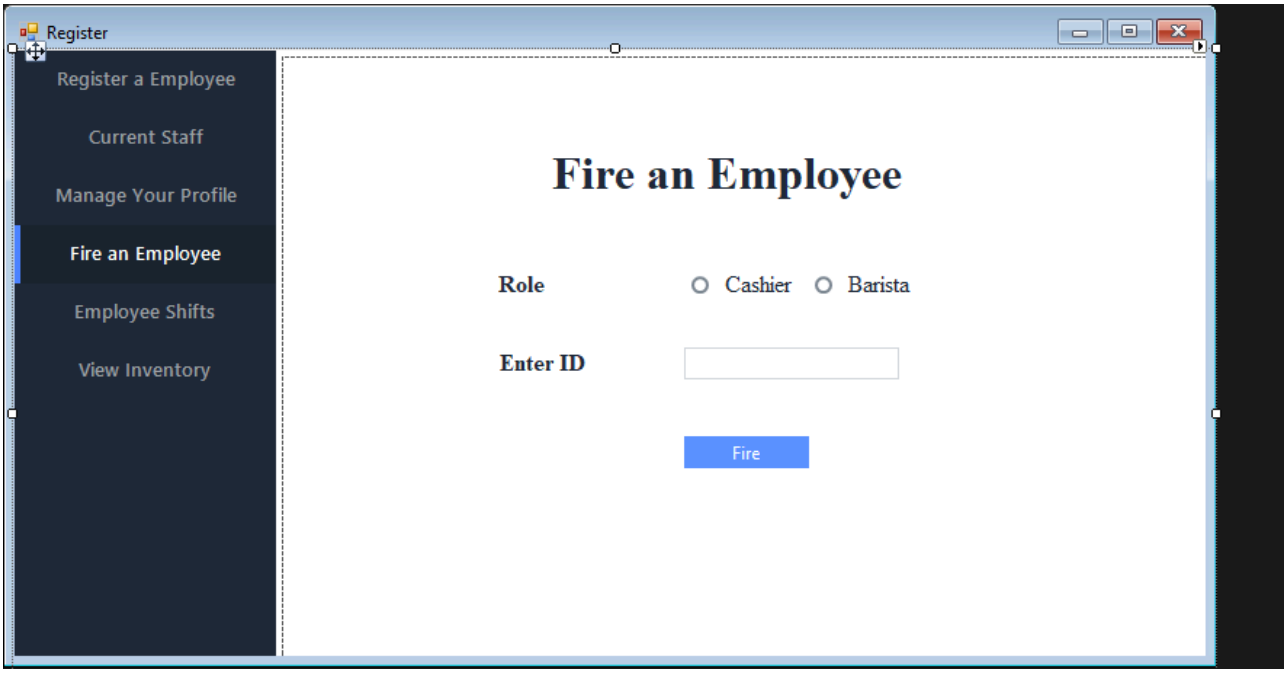
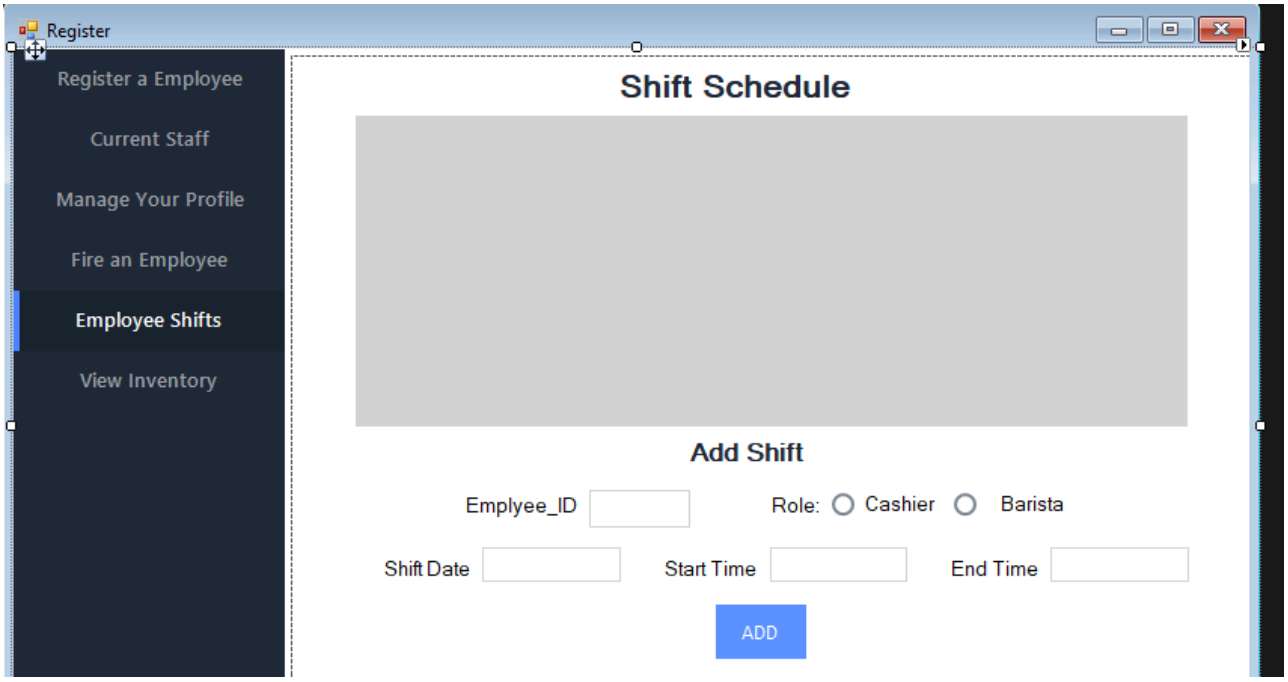
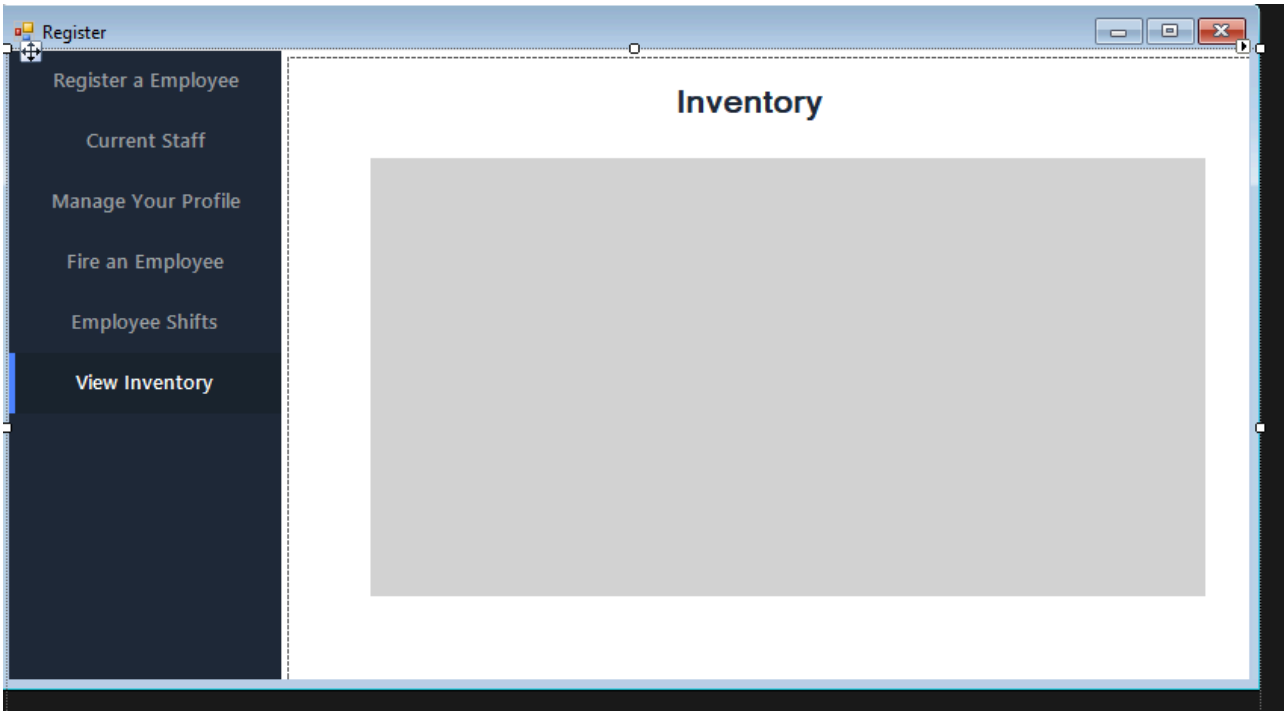
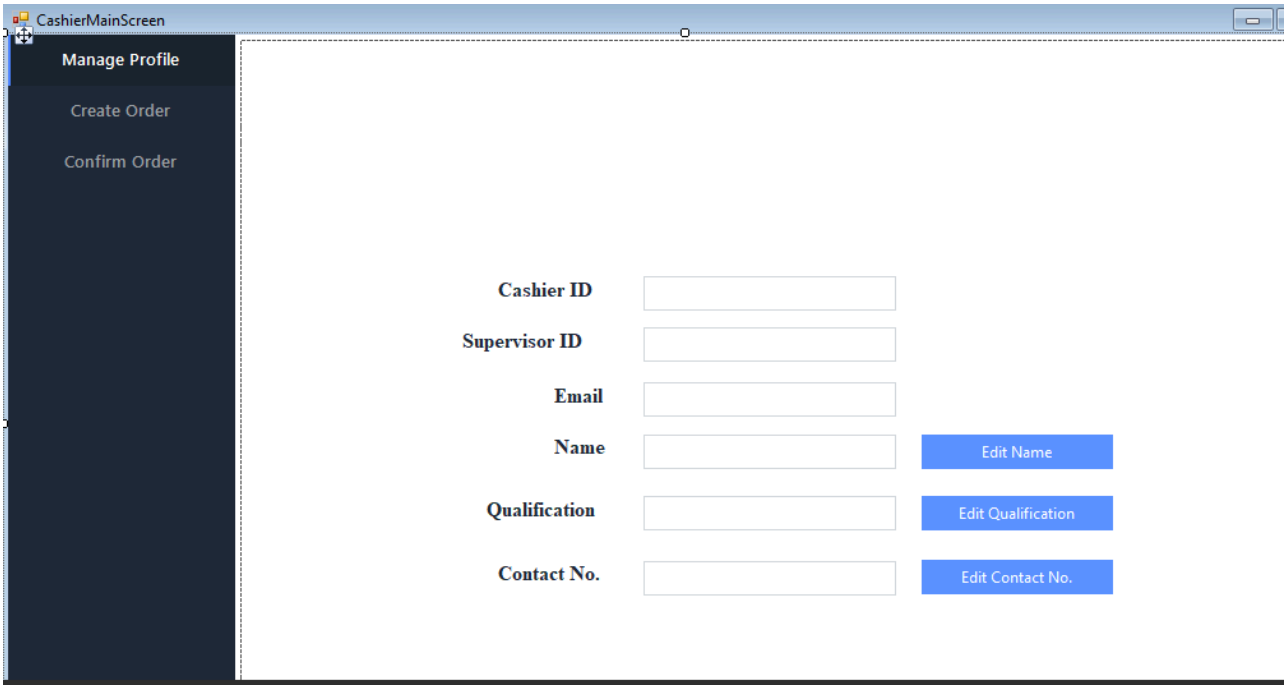
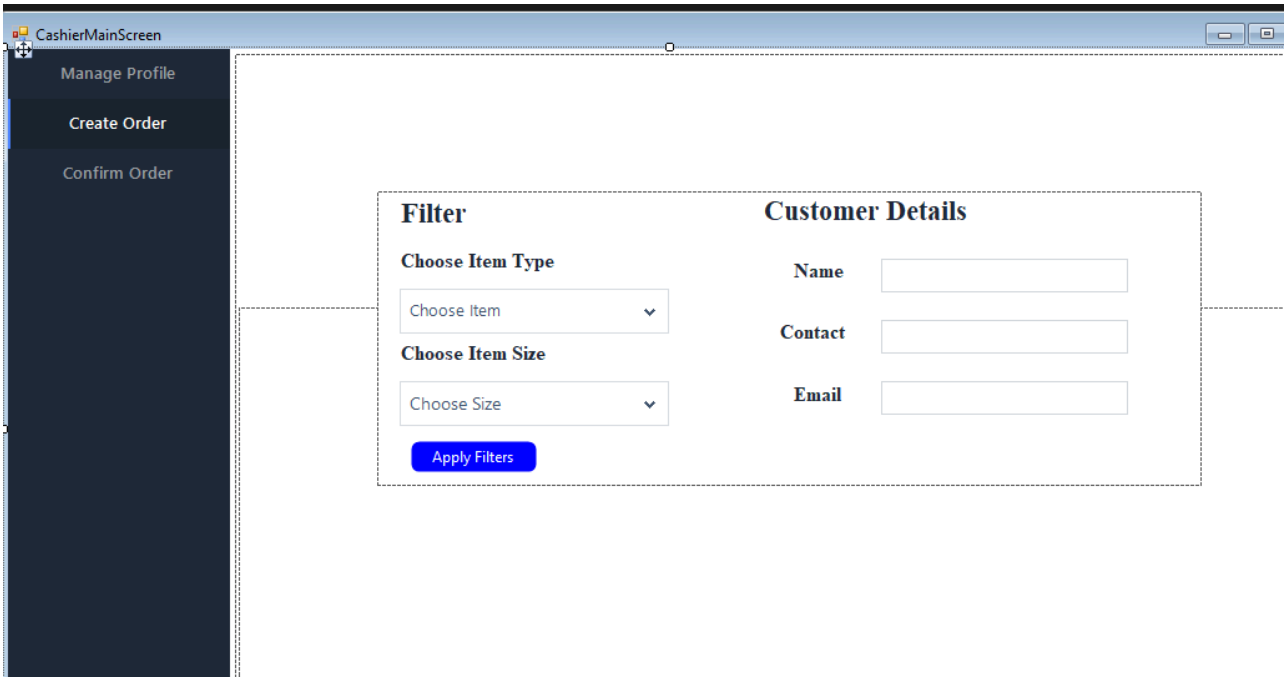
Email
Name
Qualification
Contact
Edit Mail
Edit Name
Edit Qualification
Edit Contact

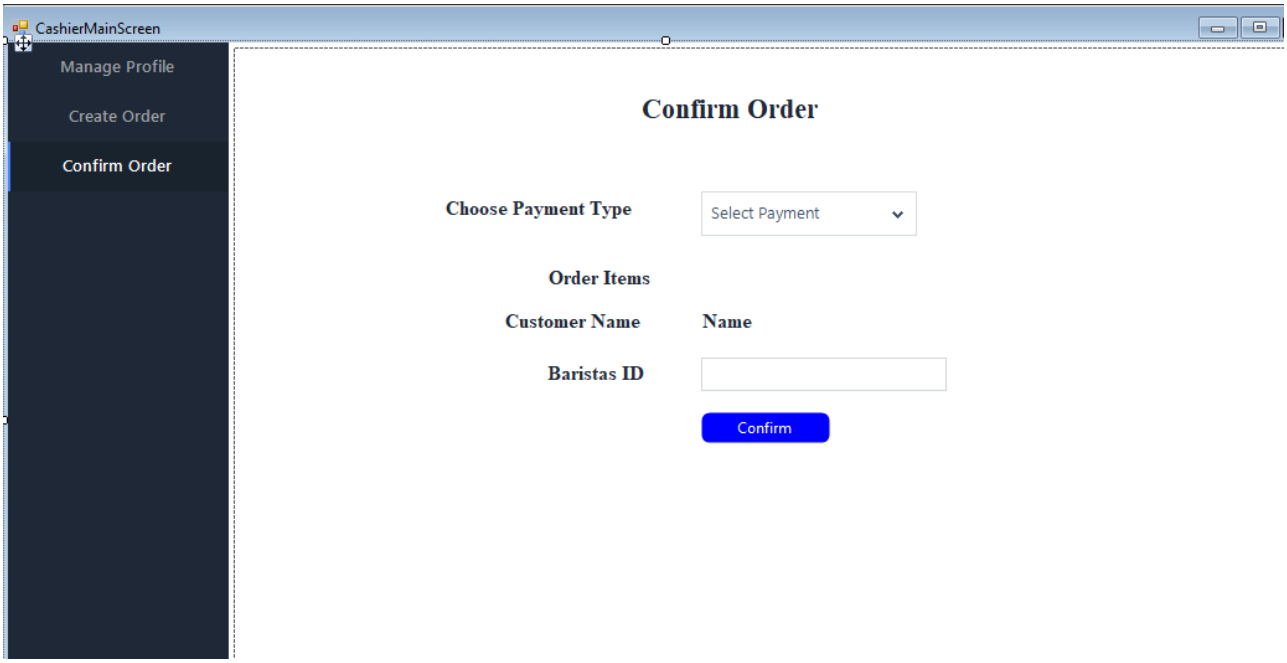

Register
Register a Employee
Current Staff
Manage Your Profile
Fire an Employee
Employee Shifts
View Inventory
Fire an Employee
Role
Cashier
Barista
Enter ID
Fire

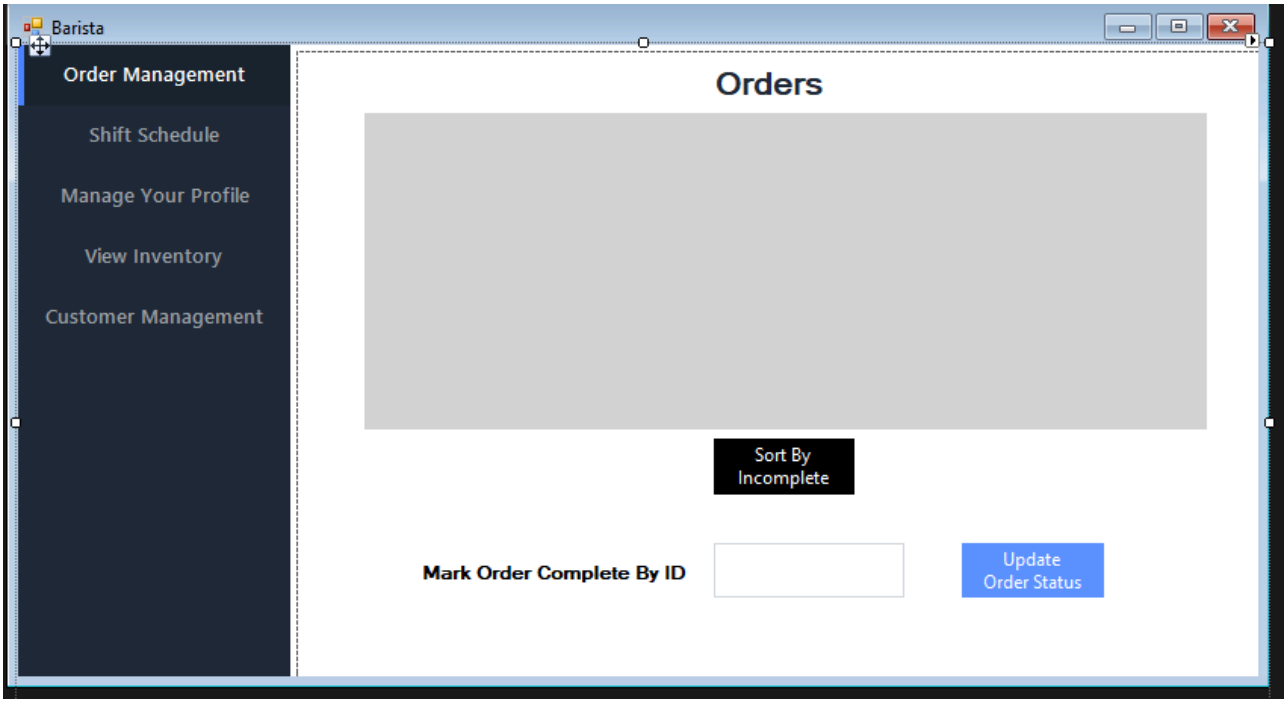

Register
Register a Employee
Current Staff
Manage Your Profile
Fire an Employee
Employee Shifts
View Inventory
Shift Schedule
Add Shift
Emplyee_ID
Role:
Cashier
Barista
Shift Date
Start Time
End Time
ADD

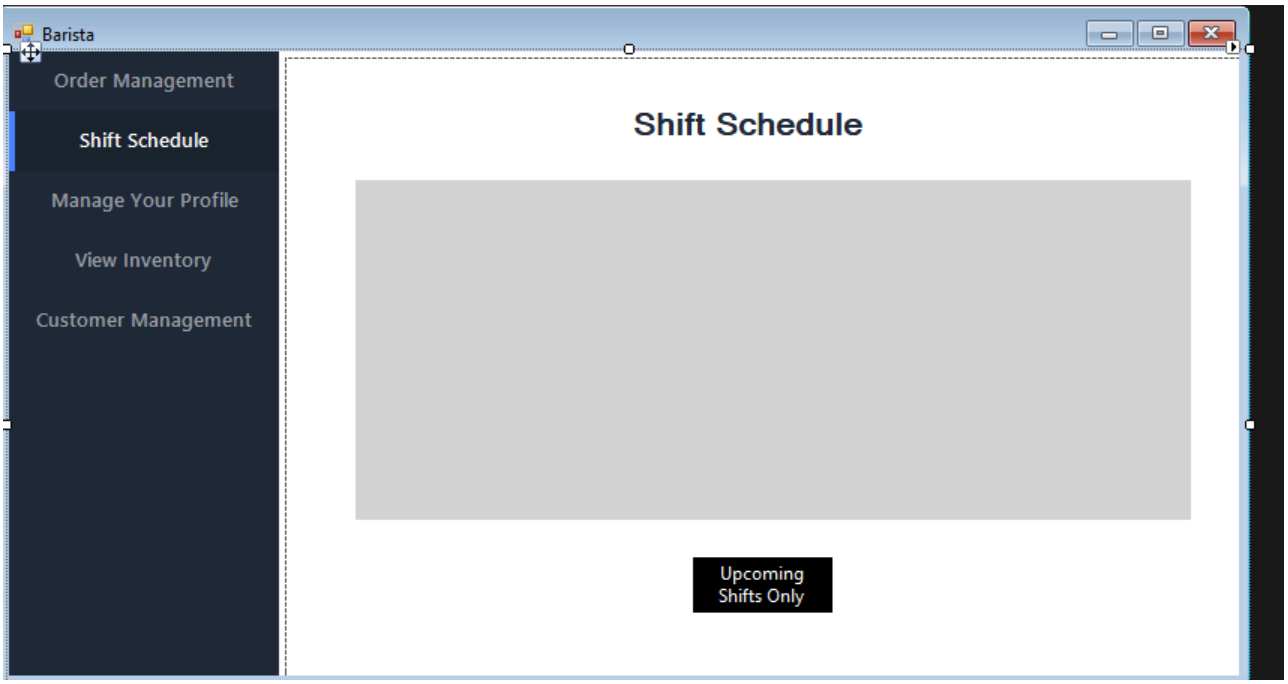

Register
Register a Employee
Current Staff
Manage Your Profile
Fire an Employee
Employee Shifts
View Inventory
Inventory

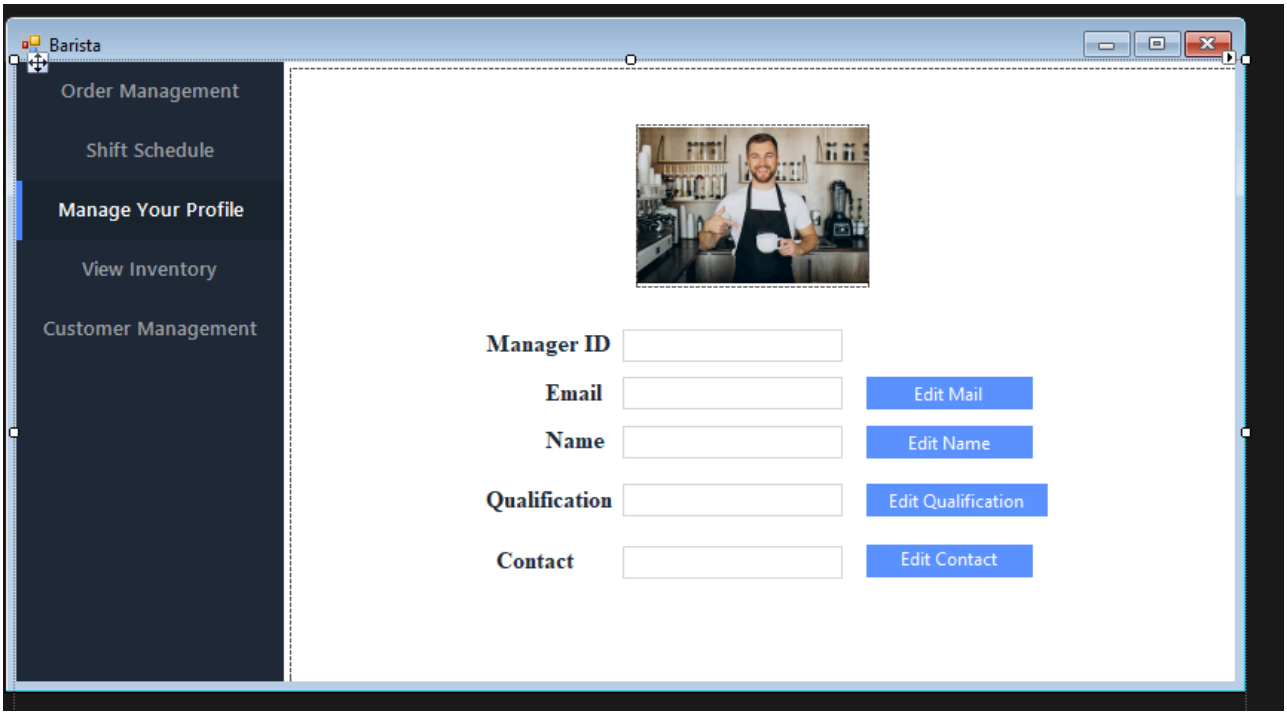

CashierMainScreen
Manage Profile
Create Order
Confirm Order
Cashier ID
Supervisor ID
Email
Name
Qualification
Contact No.
Edit Name
Edit Qualification
Edit Contact No.


CashierMainScreen
Manage Profile
Create Order
Confirm Order
Filter
Choose Item Type
Choose Item
Choose Item Size
Choose Size
Apply Filters
Customer Details
Name
Contact
Email


CashierMainScreen
Manage Profile
Create Order
Confirm Order
Confirm Order
Choose Payment Type
Select Payment
Order Items
Customer Name
Name
Baristas ID
Confirm


Barista
Order Management
Shift Schedule
Manage Your Profile
View Inventory
Customer Management
Orders
Sort By Incomplete
Mark Order Complete By ID
Update Order Status


Barista
Order Management
Shift Schedule
Manage Your Profile
View Inventory
Customer Management
Shift Schedule
Upcoming Shifts Only


Barista
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Customer Management
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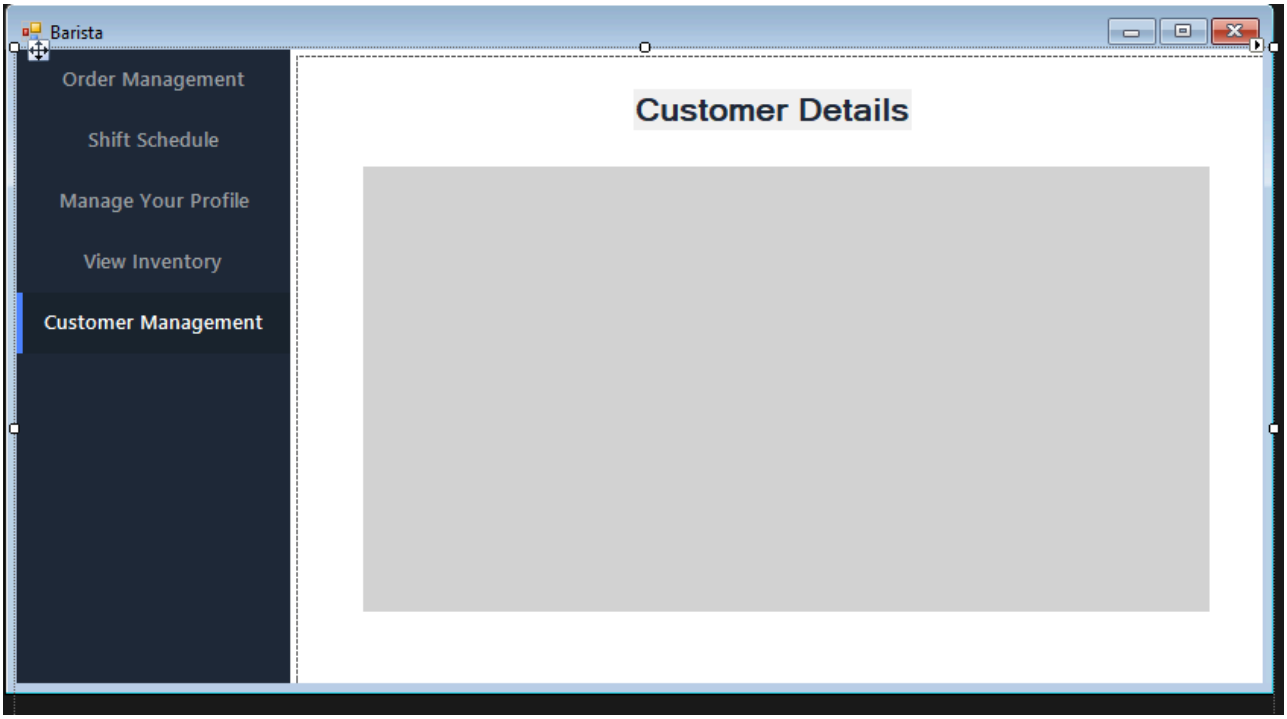
Barista
Order Management
Shift Schedule
Manage Your Profile
View Inventory
Customer Management
Inventory Details


Barista
Order Management
Shift Schedule
Manage Your Profile
View Inventory
Customer Management
Customer Details