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List of Objects

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I. Entity Objects

1. Customer

a user of the application. The following attributes will define a customer: customer ID, first name, last name, email, date of birth, and phone number.

2. Employee

a user of the application. The following attributes will define an employee: employee ID, first name, last name, and phone number.

3. Restaurant

a user of the application. The restaurant will be defined by restaurant name, restaurant type, location, amount of employees, and hours of operation.

4. Menu

a list of categories that food items will be listed in the application. The following attributes will define a menu: menu ID, menu type, and menu course.

5. Item

a list of food items listed in the POS. The following attributes will define an item: menuID, item ID, item description, item picture, item quantity, item price, and item modifications.

6. Tab

a list of the customer's food order and price input by the employee. The following attributes will define a tab by food item name, food item customizations, quantity, and price.

7. Checkout

a finalized list of the customer's food along with the total price. The checkout page will contain the following: list of food items, price of each item, sum of all food items, tax added to the subtotal, end total amount.

II. Boundary Objects

Customer Mobile Application Layout

1. Customer Boundary

This window allows customers to view their login phase of the application. The functionalities is listed below.

a. Sign Up Boundary

This window allows customers to create an account. Information will be stored in the database.

b. Login Boundary

This window will allow customers to sign into an account with verified credentials. Verification will be checking input information from the user with the database.

c. Google Login Boundary

This window will allow customers to sign into their Google account to skip the registration process. Firebase Google Authentication will check on their end for verified credentials.

2. Profile Tab Boundary

This window allows customers to view their profile tabs with different functionalities listed below.

a. Edit Account Info Boundary

This window will allow for customers to edit their account information such as updating their email address, phone number, and name.

b. Change Password Boundary

This window will allow for customers to edit their password.

c. Payment Method Boundary

This window will allow for customers to edit their payment information such as updating their credit card information or other forms of payment.

d. Settings Boundary

This window allows customers to change settings of the application.

e. Membership Card Boundary

This window allows customers to view their membership card with information such as their QR code, full name, and membership ID.

3. Open Check Boundary

This window allows customers to view current tabs at the restaurant. It will list out the restaurant name, food item, modifications, price, and total amount.

a. Alert Employee Boundary

This window allows customers to alert the restaurant staff when they have a question or want to order more items.

4. History Tab Boundary

This window allows customers to view their history of tabs at many different restaurants. Below is the functionalities of the history tab.

a. History Boundary

This window allows customers to select what restaurant they want to see their past receipt history.

5. Close Check Tab Boundary

This window allows customers to close out their current tab of the restaurant. Below is the functionalities of the close check tab.

a. Mobile Pay Boundary

This window allows users to choose their form of payment to pay for their tab.

Receipt Boundary

This window allows to view their receipt of the tab when their tab is completely paid out.

b. Pay In Restaurant Boundary

This window prompts the user that the employee will bring their check to them in person.

Employee Mobile Application Layout

1. Employee Boundary

This window allows employees to view their login phase of the application. The functionalities is listed below.

a. Login Boundary

This window will allow employees to sign into an account with verified credentials. Verification will be checking input information from the user with the database.

2. Profile Tab Boundary

This window allows employees to view their profile tabs with different functionalities listed below.

a. Account Info Boundary

This window will allow for employees to view their account information such as their email address, phone number, and name.

b. Change Password Boundary

This window will allow for employees to edit their password.

c. Settings Boundary

This window allows employees to edit some of the settings of the application.

d. Employee Card Boundary

This window allows employees to view their membership card with information such as their QR code, full name, and membership ID.

3. Table Tab Boundary

This window allows employees to see their open tabs they have on their customers. Listed below is the functionalities of the table tab.

a. Add New Table Boundary

This window allows for employees to add to themselves a new table in which they will be taking orders for.

i. Membership Input Boundary

This window allows employees to input the customers membership ID. Listed below is the functionalities of the membership input.

1. Manual Input Boundary

This window will be accessible as an alternative to the camera not responding or if the employee prefers to input the guest's membership code in manually

2. Scanner Boundary

This window will allow for the employee to open the camera application and be able to scan the client's for their manager's QR Code.

b. Open Tab Boundary

This window allows employees to view the specific customers tab directly. Listed below is the functionalities of the open tab..

i. Discount Boundary

This window allows employees to apply discounts/promos to their customers tab before checking out.

ii. Balance Print Boundary

This window will allow the employee to print the receipt of their current table's tab.

iii. Add Item Boundary

The window allows employees to add item to the open tab of the specific customer. Listed below is the functionalities of the add item button.

1. Course Boundary

This window will display the type of food course that the employee may add to their client's tab.

2. Food Item Boundary

This window will display the food items modifications. Listed below is the functionalities of the food item button.

a. Quantity Boundary

This window will display the amount of food items being added to the customer's tab.

b. Modifications Boundary

This window will allow for the employee to modify the customer's food item to their liking.

c. Special Instruction Boundary

This window will allow for the employee to type in special instructions so the kitchen staff can prepare the food accordingly.

d. Allergy Boundary

This window will display some of the ingredients the food item contains that are known to be associated with many allergies.

e. Comp/Void Item Boundary

This window will require manager approval before executing. This window will allow for the employee to void a specific food item or make the food item complimentary for the customer.

f. Add Item Boundary

This window allows an employee to add an item to an existing open tab of a customer.

iv. Checkout Boundary

This window will allow for the employee to end the customer's tab and let them see their subtotal and pay at the restaurant.

4. Close Check Tab Boundary

This window allows employees to view the specific customers tab directly. Listed below is the functionalities of the close tab.

a. Receipt Boundary

This window allows employees to view the open tab in the form of a receipt. Listed below is the functionalities of the receipt.

i. Payment Boundary

This window allows employees to choose the customers form of payment. Listed below is the functionalities of the payment button.

1. Credit Card Scanner Boundary

This window will enable credit card reading API's in order to authenticate and efficiently checkout customers.

2. Print Receipt Boundary

This window will allow for the employee to print out a receipt of the tab, including tax and subtotal in order to give to the customer or keep themselves as a physical revenue report.

Employee Web Application Layout

1. Revenue Report Tab Boundary

This window allows Employees to view their revenue report. Listed below is the functionalities of the revenue report tab.

a. Revenue Report Boundary

This window will allow for the authorized employee to run individual revenue reports or restaurant revenue reports.

2. Restaurant Tab Boundary

This window allows Employees to view the items to add or remove. Listed below is the functionalities of the restaurant tab.

a. Add Menu Item Boundary

This window will for management to add a new menu tab to the restaurant's menu.

b. Remove Menu Tab Boundary

This window will allow for management to remove a menu tab from the restaurant's menu

c. Add Item Boundary

This window will for management to add a new menu item to the restaurant's menu

d. Remove Item Boundary

This window will allow for management to remove a menu item from the restaurant's menu

3. Employee Tab Boundary

This window allows Management to view their employees in the database.. Listed below is the functionalities of the employee tab.

a. Add Employee Boundary

This window will allow for management to add a new employee to the restaurant's database.

b. Remove Employee Boundary

This window will allow for management to remove an employee to the restaurant's database.

c. Review Revenue Report Boundary

This window will allow the employee or manager to view their revenue reports.

III. Controller Objects

1. **CustomerControl**

This object controller adds and updates customer information from the system.

2. **EmployeeControl**

This object controller adds, updates, and removes customer information from the system.

3. **AuthorizeControl**

This controller authorizes users based on login credentials and requests a boundary object based on access levels.

4. **AdminControl**

This object controller adds, updates, and removes employee information from the system.

5. **AdminTabControl**

This object controller updates a tab with discounts that reflects a customers tab from the database of a system.

6. **AdminButtonControl**

This object controller updates a food item with complimentary items and void items that reflects a tab from the database of a system.

7. **MenuControl**

This object controller maintains the restaurant's food and beverage information.

8. **ItemControl**

This object controller manages all of the food and beverage items that the restaurant serves.

9. **PaymentControl**

This object controller manages the different payment methods the customer can use while also keeping the customer's information secure.

10. TabControl

This object controller adds, updates, and removes items on a customer tab that will change information in the database.

11. ModifyTabControl

This object controller modifies party size and table number of a tab that will change information in the database.