**INFO 6350**  **Fall 2024**

**Assignment #5**

**Develop a Command Line Swift Program to replicate a simple Restaurant Management Application. The program needs to be run on the command line, and the inputs can be taken as numbers and strings using readLine().**

**Entities: Menu Items, Orders, Customers**

**a. Menu Items**

* **Create**: Add a new menu item with the following attributes:
  + **Name**: The name of the menu item.
  + **Description**: A brief description of the menu item.
  + **Price**: The cost of the menu item.
  + **Category**: The type/category of the menu item (e.g., Appetizer, Main Course, Dessert).

**Constraint**: Cannot add a menu item with an existing name.

* **Read**: View all menu items.

**Constraint**: Must show items sorted by category.

* **Update**: Modify details of a menu item.

**Constraint**: Price must be greater than zero.

* **Delete**: Remove a menu item.

**Constraint**: Cannot delete if the menu item is part of an active order.

**b. Orders**

* **Create**: Place a new order with the following attributes:
  + **Order ID**: A unique identifier for the order.
  + **Customer**: The customer placing the order.
  + **Items**: A list of menu items included in the order.
  + **Total Amount**: The total price of all items in the order.
  + **Status**: The status of the order (e.g., Pending, In Progress, Completed, Delivered).
  + **Order Date**: The date and time when the order was placed.

**Constraint**: Orders cannot be created without a valid customer.

* **Read**: View all current orders.

**Constraint**: Orders must be shown with the most recent first.

* **Update**: Update an order with the ability to:
  + **Change Status**: Update the status of the order.

**Constraint**: Cannot update an order that has already been marked as "completed."

* **Delete**: Cancel an order.

**Constraint**: Orders cannot be canceled if they have been delivered.

**c. Customers**

* **Create**: Register a new customer with the following attributes:
  + **Customer ID**: A unique identifier for the customer.
  + **Name**: The full name of the customer.
  + **Email**: The email address of the customer.
  + **Phone Number**: The contact number.

**Constraint**: Email must be unique for each customer.

* **Read**: View a list of all customers.

**Constraint**: Display customers in alphabetical order by name.

* **Update**: Update customer information such as name, email, phone number.

**Constraint**: Cannot update if there are pending orders under the customer's account.

* **Delete**: Remove a customer from the system.

**Constraint**: Cannot delete a customer with active or past orders.

**It will be Menu driven program, please give user some options to move to next step or to go back. No graphical user interface is required/needed.**

**The purpose of this assignment is to practice Swift constructs (classes, instances, properties, etc.). The evaluation of your solution will take this into consideration.**