Problem Statement

► The Aim of this application is to form a bridge between restaurant and customers.
► The Restaurant owners must be able to sign in to the application to create and list out their food items along with the price
► So, that the customers could sign up , view the nearby restaurants and place the order.
► The customer selects the method of payment and makes a payment for his order.
► The restaurant owner can accept his order and delivery the order to customer.
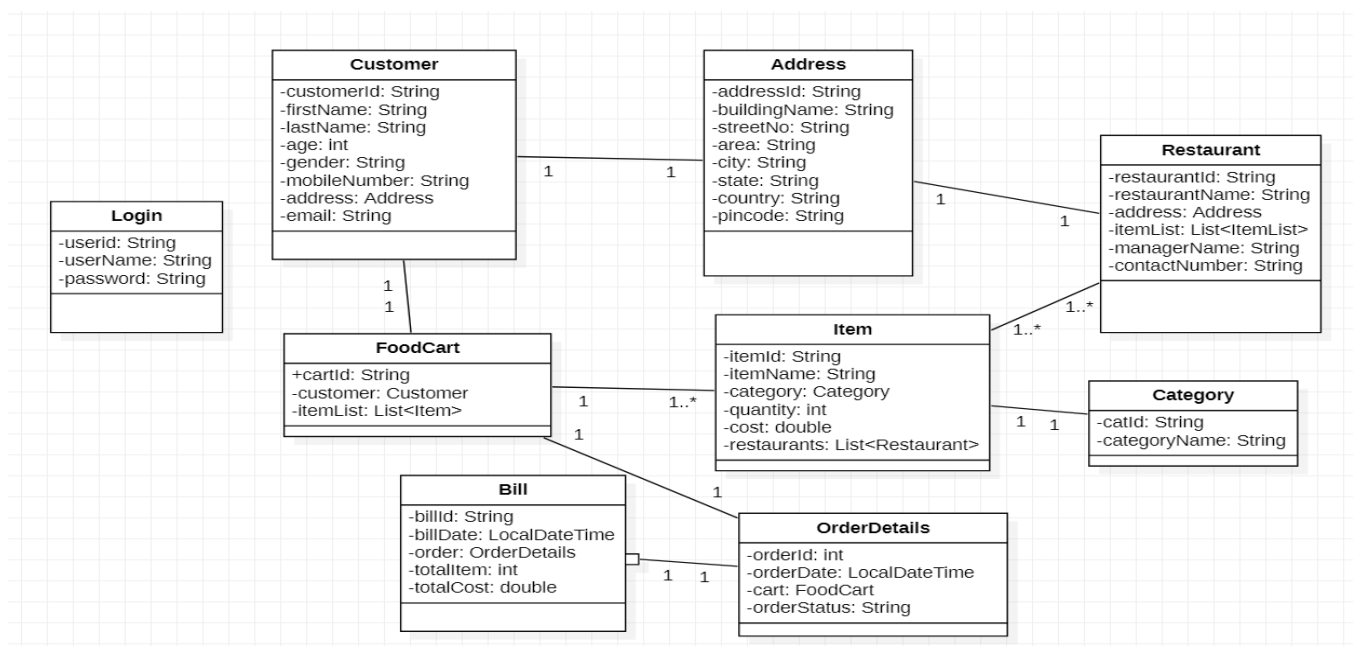
Road Map

► Application will be developed in following Sprints –

1. Core Java +JPA with Hibernate
2. Spring Boot + Rest Controller + JPA with Hibernate
3. React for UI design (Front End) + Integration with previous Spring Boot Code

Modules

► Login Module
► Customer Module
► Restaurant Module
► Order Module
► Bill Module

Class Design

POJO Classes:

Class Design

Service Interface:

IBillService

+addBill(Bill bill): Bill
+updateBill(Bill bill): Bill
+removeBill(Bill bill): Bill
+viewBill(Bill bill): Bill
+viewBills(LocalDate startDate, LocalDate endDate): List<Bill>
+viewBills(String custId): List<Bill>
+calculateTotalCost(Bill bill): double

ICartService

+addItemToCart(FoodCart cart, Item item): FoodCart
+increaseQuantity(FoodCart cart, Item item, int quantity): FoodCart
+reduceQuantity(FoodCart cart, Item item, int quantity): FoodCart
+removeItem(FoodCart cart, Item item): FoodCart
+clearCart(FoodCart cart): FoodCart

ICustomerService

+addCustomer(Customer customer): Customer
+updateCustomer(Customer customer): Customer
+removeCustomer(Customer customer): Customer
+viewCustomer(Customer customer): Customer
+viewAllCustomers(Restaurant rest): List<Customer>

IItemService

+addItem(Item item): Item
+updateitem(Item item): Item
+viewItem(Item item): Item
+removeItem(Item item): Item
+viewAllItems(Category cat): List<Item>
+viewAllItems(Restaurant res): List<Item>
+viewAllItemsByName(String name): List<Item>

ICategoryService

+addCategory(Category cat): Category
+updateCategory(Category cat): Category
+removeCategory(Category cat): Category
+viewCategory(Category cat): Category
+viewAllCategory(): List<Category>

ILoginService

+signIn(Login login): Login
+signOut(Login login): Login

IOrderService

+addOrder(OrderDerails order): OrderDetails
+updateOrder(OrderDetails order): OrderDetails
+removeOrder(OrderDetails order): OrderDetails
+viewOrder(OrderDetails order): OrderDetails
+viewAllOrders(Restaurant res): List<OrderDetails>
+viewAllOrders(Customer customer): List<OrderDetails>

IRestaurantService

+addRestaurant(Restaurant res): Restaurant
+updateRestaurant(Restaurant res): Restaurant
+removeRestaurant(Restaurant res): Restaurant
+viewRestaurant(Restaurant res): Restaurant
+viewBearByRestaurant(String location): List<Restaurant>
+viewRestaurantByItemName(String name): List<Restaurant>

Class Design

Repository:

IBillRepository

+addBill(Bill bill): Bill
+updateBill(Bill bill): Bill
+removeBill(Bill bill): Bill
+viewBill(Bill bill): Bill
+viewBills(LocalDate startDate, LocalDate endDate): List<Bill>
+viewBills(String custId): List<Bill>
+calculateTotalCost(Bill bill): double

ICartRepository

+addItemToCart(FoodCart cart, Item item): FoodCart
+increaseQuantity(FoodCart cart, Item item, int quantity): FoodCart
+reduceQuantity(FoodCart cart, Item item, int quantity): FoodCart
+removeItem(FoodCart cart, Item item): FoodCart
+clearCart(FoodCart cart): FoodCart

ICustomerRepository

+addCustomer(Customer customer): Customer
+updateCustomer(Customer customer): Customer
+removeCustomer(Customer customer): Customer
+viewCustomer(Customer customer): Customer
+viewAllCustomers(Restaurant rest): List<Customer>

IItemRepository

+addItem(Item item): Item
+updateitem(Item item): Item
+viewItem(Item item): Item
+removeItem(Item item): Item
+viewAllItems(Category cat): List<Item>
+viewAllItems(Restaurant res): List<Item>
+viewAllItemsByName(String name): List<Item>

ICategoryRepository

+addCategory(Category cat): Category
+updateCategory(Category cat): Category
+removeCategory(Category cat): Category
+viewCategory(Category cat): Category
+viewAllCategory(): List<Category>

ILoginRepository

+signIn(Login login): Login
+signOut(Login login): Login

IOrderRepository

+addOrder(OrderDerails order): OrderDetails
+updateOrder(OrderDetails order): OrderDetails
+removeOrder(OrderDetails order): OrderDetails
+viewOrder(OrderDetails order): OrderDetails
+viewAllOrders(Restaurant res): List<OrderDetails>
+viewAllOrders(Customer customer): List<OrderDetails>

IRestaurantRepository

+addRestaurant(Restaurant res): Restaurant
+updateRestaurant(Restaurant res): Restaurant
+removeRestaurant(Restaurant res): Restaurant
+viewRestaurant(Restaurant res): Restaurant
+viewBearByRestaurant(String location): List<Restaurant>
+viewRestaurantByItemName(String name): List<Restaurant>