Car Rental Management System
Assessment - 3

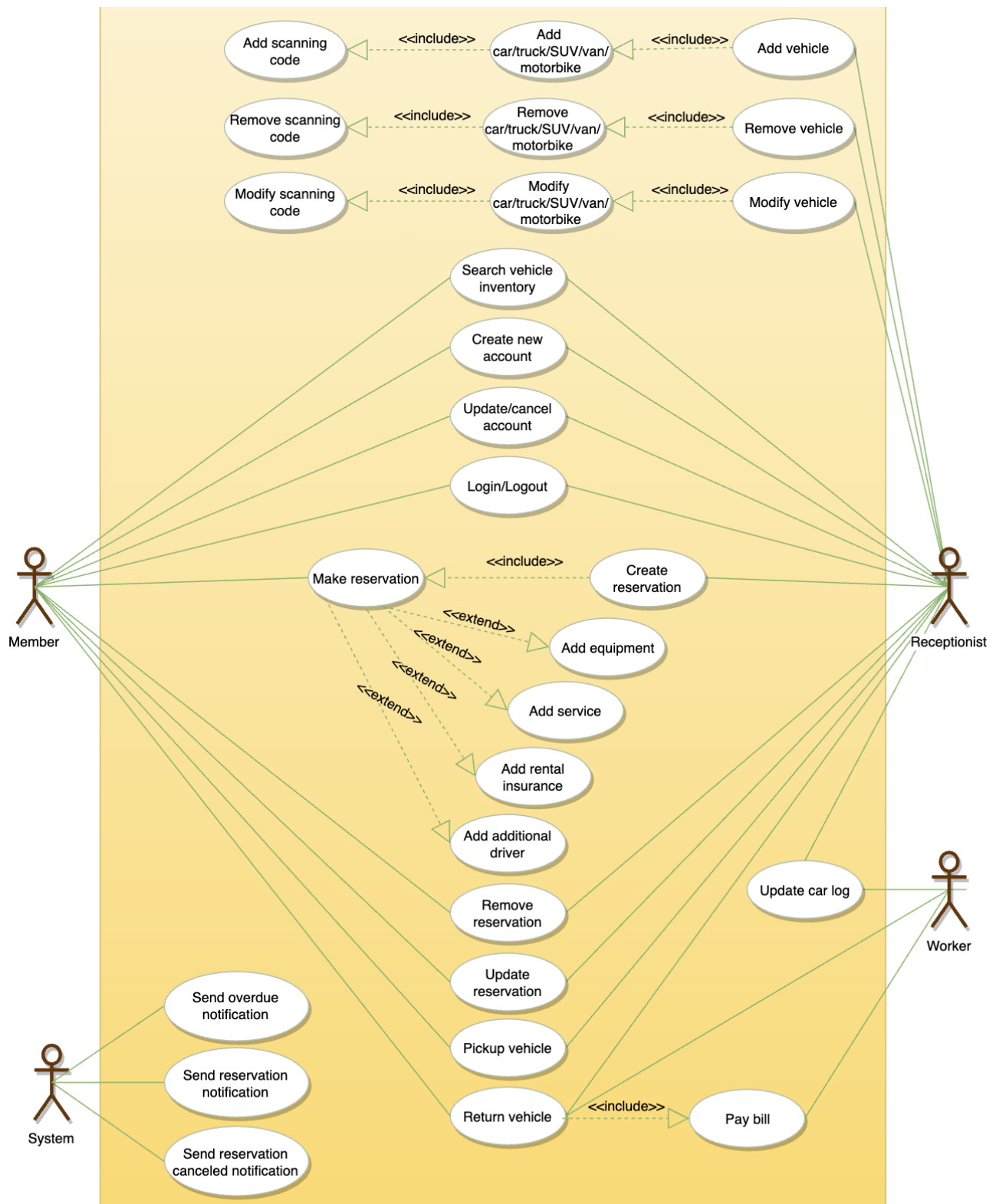**Software Engineering Lab - BCSE301P**

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1. Draw the Usecase diagram.

A **Use Case Diagram** is a visual representation of the interactions between users (actors) and a system, showing how users accomplish specific tasks or goals. It helps in understanding system requirements and user interactions. The diagram consists of:

- **Actors**: Entities (users or external systems) interacting with the system.

- **Use Cases**: Functionalities or services provided by the system.

- **Relationships**: Connections between actors and use cases, such as associations, includes, and extends.

2. Draw the Class diagram.

A **Class Diagram** is a structural diagram in UML (Unified Modeling Language) that represents the static structure of a system by showing its classes, attributes, methods, and relationships. It is used for object-oriented design and development. The diagram includes:

- **Classes**: Represent entities with attributes and methods.

- **Attributes**: Properties of a class.

- **Methods**: Functions or behaviors of a class.

- **Relationships**: Associations, inheritances (generalization), dependencies, and aggregations between classes.

Car Rental System
+ID: int
+User_type: string
+Login()
+Logout()

Car
+Make: string
+Model: string
+VIN: string
+License_Plate: string
+Transmission: string
+Body_type: string
+Class_type: string
+CarList: string
+Status()
+Maintenance()
+Review()
+Renew()
+Return_date()
+Add()
+Delete()
+Availability()
+Search()

User Interface
+Name: string
+User_ID: int
+CheckAccount()

Transaction
+Date: string
+VIN: string
+Checkout()
+Contract_Expire()
+Renew()
+Maintenence()

Account
+Cars_rented: string
+Cars_reserved: string
+Cars_missing: string
+Cars_overdue: string
+Fine: float
+Calculate_fine()

Admin
+Name: string
+Admin_ID: int
+Report()
+Manage_privileges()
+Remove_account()
+Create_account()

Employee
+Name: string
+Employee_ID: int
+Update_Cars()