Ex.No:1   IDENTIFICATION OF MINI PROJECT and UI Design

Aim:

    To identify the application and to draw the Schema and ER diagram.

Description:

• The data which is stored in the database at a particular moment of time is called an instance of the database.

 • The overall design of a database is called schema.

 • A database schema is the skeleton structure of the database. It represents the logical view of the entire database

 Procedure

 • Identify the application based on your Area of Interest/SIH problems which you will use throughout all the experiments.

 • Identify the entities and its attributes

 • Describe the major functionalities of your Application

• Draw the Schema diagram for the application • Draw the ER diagram for the application with the

relationship.

Application Title: ” Vehicle Rental System “

Entities and Attributes:

    1.) Customer:
- Cutomer_ID
- Name
- Phone
- Email_ID
- Address
- DOB
- License_NO

    2.) Vehicle:
- Vehicle_ID
- Brand
- Model
- Reg_No
- Colour
- Mileage
- Rental rate
- Fuel type
- Engine Capacity

    3.) Reservation:
- Vehicle_ID
- Customer_ID

- Pickup date
- Return date

4.) Employee:

- Employee_id
- Name
- Position
- Email_id
- Phone
- Shift Schedule
- Salary

5.) Payment

- Payment_ID
- Rental_ID
- Amount
- Payment date
- Paymethod

6.) Discount:

- Discount_ID
- Code
- Percentage
- Expiry date
- Usage Limit
- Time used
- Applicable category

Schema Diagram

1.Customer

Customer_Id	Name	Phone	Email_Id	Address	DOB	License_No

2.Vehicle

Vehicle_Id	Brand	Model	Reg_No	Mileage	Color	Rental_Rate	Engine_capacity

3.Reservation

Reservation_Id	Customer_Id	Vehicle_Id	ReservationDate	PickupDate	ReturnDate	ReservationStatus

4.Employee

Employee_Id	Name	Position	Email_Id	Phone	ShiftSchedule	Salary

5.Payment

Payment_Id	Rental_Id	Amount	Payment_Date	Pay_Method

6.Discount

Discount_Id	Code	Percentage	Expiry_Date	Usage_limit	TimesUsed	Applicable_category

ER Diagram
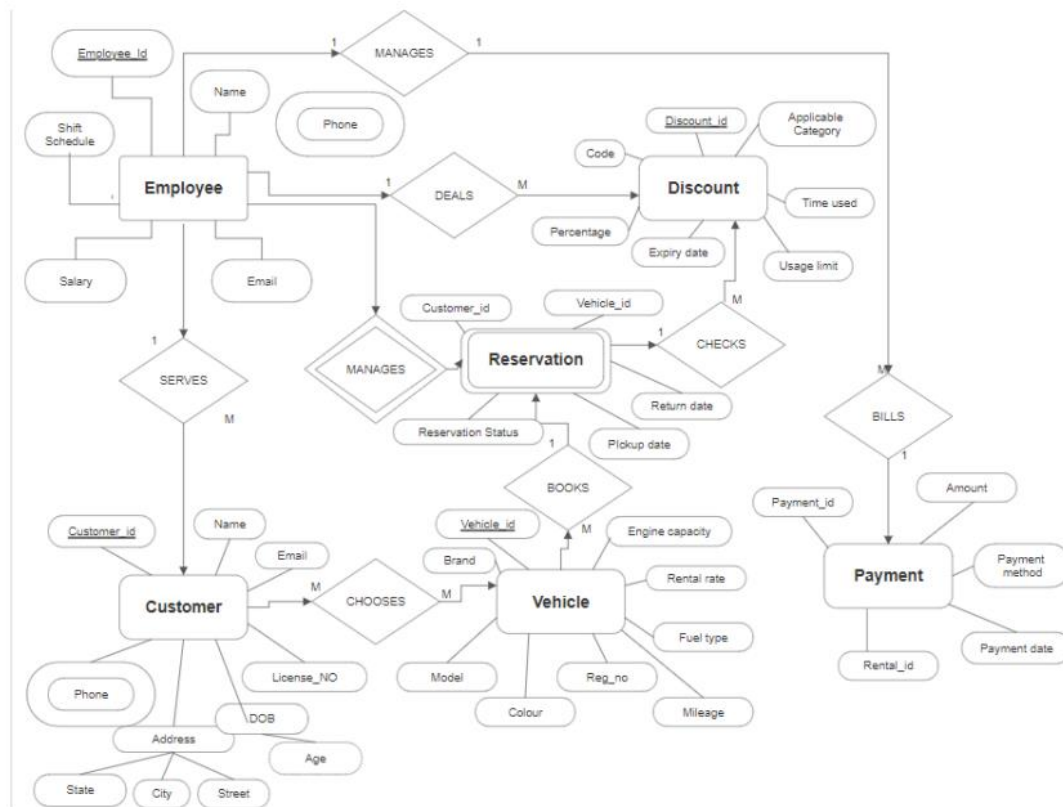
Major Functionalities:

The Vehicle Rental System provides robust user authentication, allowing secure login for both customers and employees. Role-based access control ensures that users have appropriate permissions within the system.

  ➢ Vehicle management:
    The system enables the addition, updating, and removal of vehicles, including details such as brand, model, availability, and mileage. This ensures a comprehensive and up-to-date vehicle inventory.
 ➢ Customer management:
    It allow for the seamless registration of new customers, updating of customer information, and removal of customer accounts if necessary. This ensures accurate and current customer records.
  ➢ Reservation and rental management:
    It empower customers to make reservations for specific dates and vehicles. The system finalizes rental agreements, assigning vehicles for designated rental periods and calculating costs based on rates and duration.

UI Diagram:
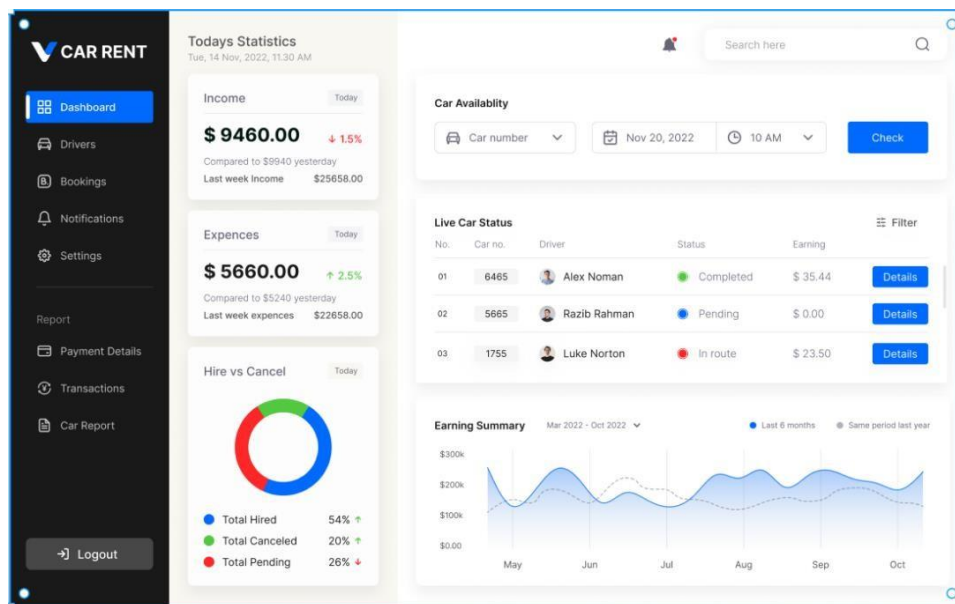
- ➤ Employee management :
  It involve the addition and management of employee accounts, complete with roles and permissions. The system monitors and tracks employee activities related to reservations and rentals.
- ➤ Discount management:
  The system tracks usage limits and the number of times each discount is applied, contributing to effective promotional strategies.It allow for the addition of new discounts, each with unique codes, percentages, and expiration dates.
- ➤ Reporting and analytics:
  It generate comprehensive reports on rental history, revenue, and other key metrics. The system analyzes trends in vehicle popularity, customer preferences, and revenue streams to inform strategic decision-making.
- ➤ Feedback and reviews :
  It enable customers to provide feedback on their rental experiences. The system utilizes this valuable input to continuously improve services and enhance customer satisfaction.

Result:

Thus, The Application - "Vehicle Rental System" is identified and Schema and ER diagram were drawn