

**Air University**

**Submitted to:** Junaid Nazar

**Muhammad Bilal**

241914

**Muhammad Talha**

241890

Apex Autos

CAR SHOWROOM MANAGEMENT

**Main Entities and Attributes**

1. **Users**

* UserID – INT (PK)
* Username – NVARCHAR(50) UNIQUE
* Password – NVARCHAR(100)

1. **Branches**

* BranchID – INT (PK)
* BranchName – NVARCHAR(100)
* Location – NVARCHAR(100)
* Contact – NVARCHAR(20)

1. **Employees**

* EmployeeID – INT (PK)
* Name – NVARCHAR(100)
* Contact – NVARCHAR(20)
* Position – NVARCHAR(50)
* BranchID – INT (FK → Branches.BranchID)

1. **Cars**

* CarID – INT (PK)
* Make – NVARCHAR(50)
* Model – NVARCHAR(50)
* Year – INT
* Color – NVARCHAR(30)
* Price – DECIMAL(18,2)
* Status – NVARCHAR(20) CHECK ('Available', 'Sold')
* BranchID – INT (FK → Branches.BranchID)

1. **Customers**

* CustomerID – INT (PK)
* Name – NVARCHAR(100)
* Contact – NVARCHAR(20)
* Email – NVARCHAR(100)
* CNIC – NVARCHAR(20)

1. **Sales**

* SaleID – INT (PK)
* CarID – INT (FK → Cars.CarID, UNIQUE)
* CustomerID – INT (FK → Customers.CustomerID)
* EmployeeID – INT (FK → Employees.EmployeeID)
* SaleDate – DATE
* Price – DECIMAL(18,2)

1. **Suppliers**

* SupplierID – INT (PK)
* Name – NVARCHAR(100)
* Contact – NVARCHAR(20)
* Email – NVARCHAR(100)

1. **Purchases**

* PurchaseID – INT (PK)
* SupplierID – INT (FK → Suppliers.SupplierID)
* CarID – INT (FK → Cars.CarID, UNIQUE)
* PurchaseDate – DATE
* Cost – DECIMAL(18,2)

1. **Feedback**
   * FeedbackID – INT (PK)
   * CustomerID – INT (FK → Customers.CustomerID)
   * Message – NVARCHAR(MAX)
   * FeedbackDate – DATE
2. **Car Audit**

* AuditID INT PK
* CarName VARCHAR
* Make VARCHAR
* Model VARCHAR
* RecordedAt DATETIME

1. **Employee Audit**

**•** EmployeeID INT PRIMARY KEY

• Name NVARCHAR

• Contact VARCHAR

• Position VARCHAR

Entity Relationships (For ERD)

**Users:** Independent (for login/authentication).

**Branches:**  
 - 1 → M Employees  
 - 1 → M Cars

**Employees:**  
 - M → 1 Branches  
 - 1 → M Sales

**Cars:**  
 - M → 1 Branches  
 - 1 → 1 Sales  
 - 1 → 1 Purchases

**Customers:**  
 - 1 → M Sales  
 - 1 → M Feedback

**Suppliers:**  
 - 1 → M Purchases

**Sales:**  
 - Belongs to one Car, one Customer, and one Employee

**Purchases:**  
 - Belongs to one Car and one Supplier

**Feedback:** - Belongs to one Customer