SQL PROJECT BASED ON BUS MANAGEMENT SYSTEM

ERD

Fares

Ticket

Passenger

1 1 1 M

BUS STOP

M

Fare rate as

Age

Sleeper/ AC/Non AC

have

1

Route

have

BUS

M M

DRIVER

M

have

M M

have

Conductor

M

Schedule

M

1. Many Bus Stop have Many Bus
2. Many Bus Have Many Driver
3. Many Bus have Many Bus Rider
4. One Bus Rider have one Ticket
5. Many Bus have Many Conductor
6. One Bus have Different type of Fares

* (Age-Child, Adult, Senior citizen)
* Route
* AC, Non-AC, Sleeper
* SQL CODING

CREATE TABLE Buses (

Bus\_NO INT PRIMARY KEY AUTO\_INCREMENT,

Bus\_Name VARCHAR (50),

Bus\_Type VARCHAR (50),

Bus\_Time Datetime,

Total\_Seats INT,

);

CREATE TABLE Routes (

Route\_ID INT PRIMARY KEY AUTO\_INCREMENT,

Route\_Start VARCHAR (50),

Route\_End VARCHAR (50),

Distance INT,

No\_Of\_Stops INT

);

CREATE TABLE Drivers (

Driver\_ID INT PRIMARY KEY AUTO\_INCREMENT,

Name VARCHAR (255),

Driver License VARCHAR (50) UNIQUE,

Phone VARCHAR (20),

Bus\_No INT,

Route\_ID INT,

FOREIGN KEY (Bus\_No) REFERENCES Buses (Bus\_No),

FOREIGN KEY (Route\_ID) REFERENCES Routes (Route\_ID),

);

CREATE TABLE Conductors (

Conductor\_ID INT PRIMARY KEY AUTO\_INCREMENT,

Name VARCHAR (255),

Phone VARCHAR(20),

Route\_ID INT,

FOREIGN KEY (Route\_ID) REFERENCES Routes (Route\_ID)

);

CREATE TABLE Schedules (

Schedule\_ID INT PRIMARY KEY AUTO\_INCREMENT,

Bus\_No INT,

Route\_ID INT,

Departure\_Time TIME,

Arrival\_Time TIME,

Travel\_Date DATE,

Driver\_ID INT,

Conductor\_ID INT,

FOREIGN KEY (Bus\_No) REFERENCES Buses (Bus\_No),

FOREIGN KEY (Route\_ID) REFERENCES Routes (Route\_ID),

FOREIGN KEY (Driver\_ID) REFERENCES Drivers (Driver\_ID),

FOREIGN KEY (Conductor\_ID) REFERENCES Conductors (Conductor\_ID)

);

CREATE TABLE Passengers (

Passenger\_ID INT PRIMARY KEY AUTO\_INCREMENT,

Name VARCHAR (255),

Phone VARCHAR (20),

Email VARCHAR (255),

DOB DATE,

Gender VARCHAR (10)

);

CREATE TABLE Ticket (

Ticket\_No INT PRIMARY KEY AUTO\_INCREMENT,

Passenger\_ID INT,

Ticket\_Date DATE,

Ticket\_Time TIME);

Inserting data

sql

INSERT INTO Buses (Bus\_No, Bus\_Name, Bus\_Type, Total\_Seats)

VALUES ('Volvo 9400','Express A', 'AC', 40, 'KA-01-AB-1234');

SELECT \* FROM Buses;

INSERT INTO Routes (Route\_ID, Route\_Start, Route\_End, Distance, no\_Of\_Stops)

VALUES (101,'Bangalore', 'Mysore', 150, 9);

SELECT \* FROM Routes;

INSERT INTO Drivers (Name, License, Phone, Route\_ID)

VALUES ('John Doe', 'DL987654321', '9876543210',101);

SELECT \* FROM Drivers;

INSERT INTO Conductors (Name, Phone, Route\_ID)

VALUES ('Jane Smith', '9988776655',101);

SELECT \* FROM Conductor;

INSERT INTO Schedules (Bus\_ID, Route\_ID, Departure\_Time, Arrival\_Time, Travel\_Date, Driver\_ID, Conductor\_ID)

VALUES (1, 1, '08:00:00', '11:00:00', '2025-09-01', 1, 1);

SELECT \* FROM Schedules;

INSERT INTO Passengers (Name, Phone, Email, DOB, Gender)

VALUES ('Alice', '8765432109', 'alice@example.com', '1990-05-15', 'Female');

SELECT \* FROM Passengers;

INSERT INTO Ticket (Passenger\_ID, Seat\_Number, Ticket\_Date, Ticket\_Time, Status)

VALUES (1, 25, '2025-08-20', ‘12.30’,'Booked');

SELECT \* FROM Ticket;