

## *SIT103 DATABASE FUNDAMENTALS*

### *MINIPROJECT PART 2*

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1. Write SQL statements to create all tables in the final normalized ERD in Task 4.2C.

CUSTOMER: CREATE TABLE Customer (

Customer\_ID INT AUTO\_INCREMENT PRIMARY KEY,

Name VARCHAR(100) NOT NULL,

Age INT NOT NULL,

Email VARCHAR(100) UNIQUE NOT NULL,

Phone\_Number VARCHAR(15) NOT NULL

);

DRIVER: CREATE TABLE Driver (

Driver\_ID INT AUTO\_INCREMENT PRIMARY KEY,

Name VARCHAR(100) NOT NULL,

Email VARCHAR(100) UNIQUE NOT NULL,

Phone\_Number VARCHAR(15) NOT NULL,

Car\_Number VARCHAR(20) NOT NULL

);

BOOKING : CREATE TABLE Booking (

Booking\_ID INT AUTO\_INCREMENT PRIMARY KEY,

Booking\_Date DATE NOT NULL,

Current\_Location VARCHAR(255) NOT NULL,

Destination\_Location VARCHAR(255) NOT NULL,

Customer\_ID INT,

Driver\_ID INT,

FOREIGN KEY (Customer\_ID) REFERENCES Customer(Customer\_ID),

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

);

PAYMENT : CREATE TABLE Payment (

Payment\_ID INT AUTO\_INCREMENT PRIMARY KEY,

Payment\_Date DATE NOT NULL,

Amount DECIMAL(10, 2) NOT NULL,

Booking\_ID INT,

FOREIGN KEY (Booking\_ID) REFERENCES Booking(Booking\_ID)

);

REVIEW : CREATE TABLE Review (

Review\_ID INT AUTO\_INCREMENT PRIMARY KEY,

Review\_Date DATE NOT NULL,

Description TEXT,

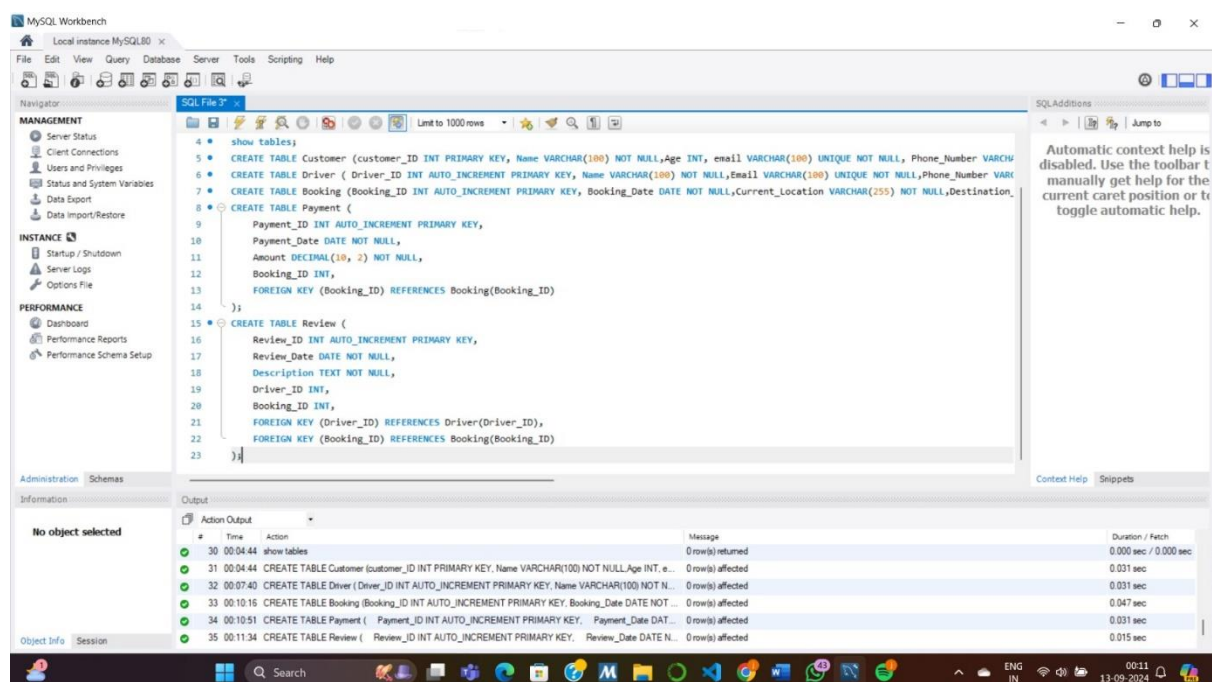
Driver\_ID INT,

Booking\_ID INT,

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

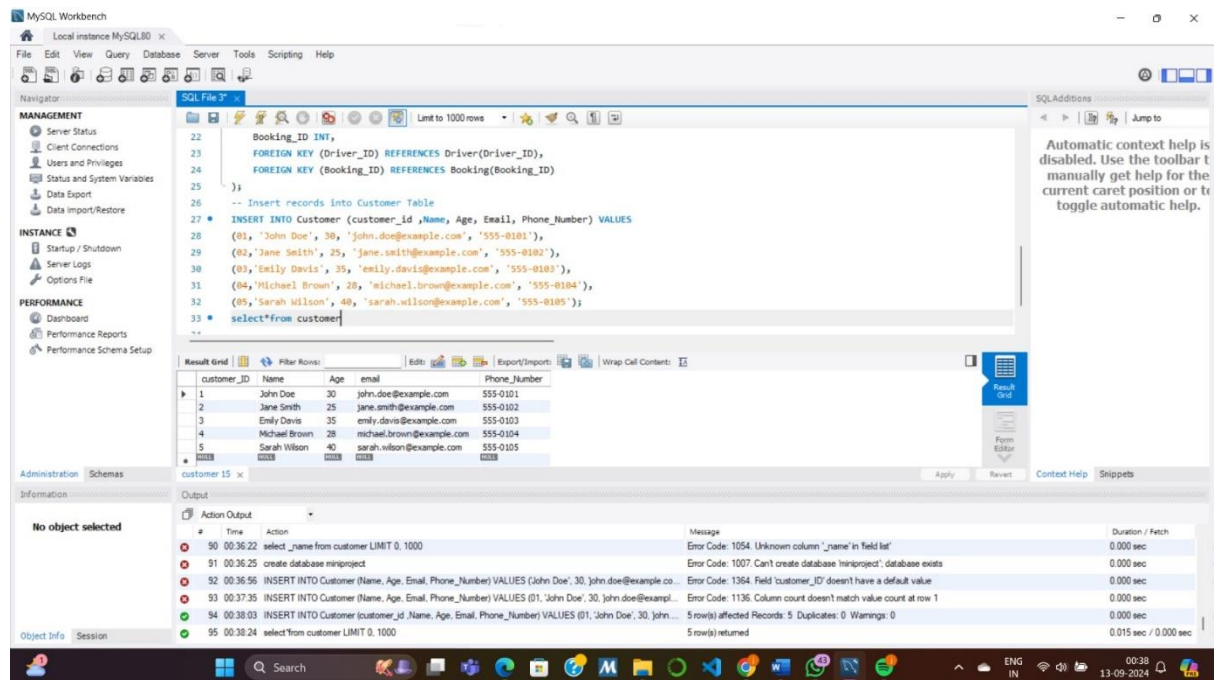
FOREIGN KEY (Booking\_ID) REFERENCES Booking(Booking\_ID)

);

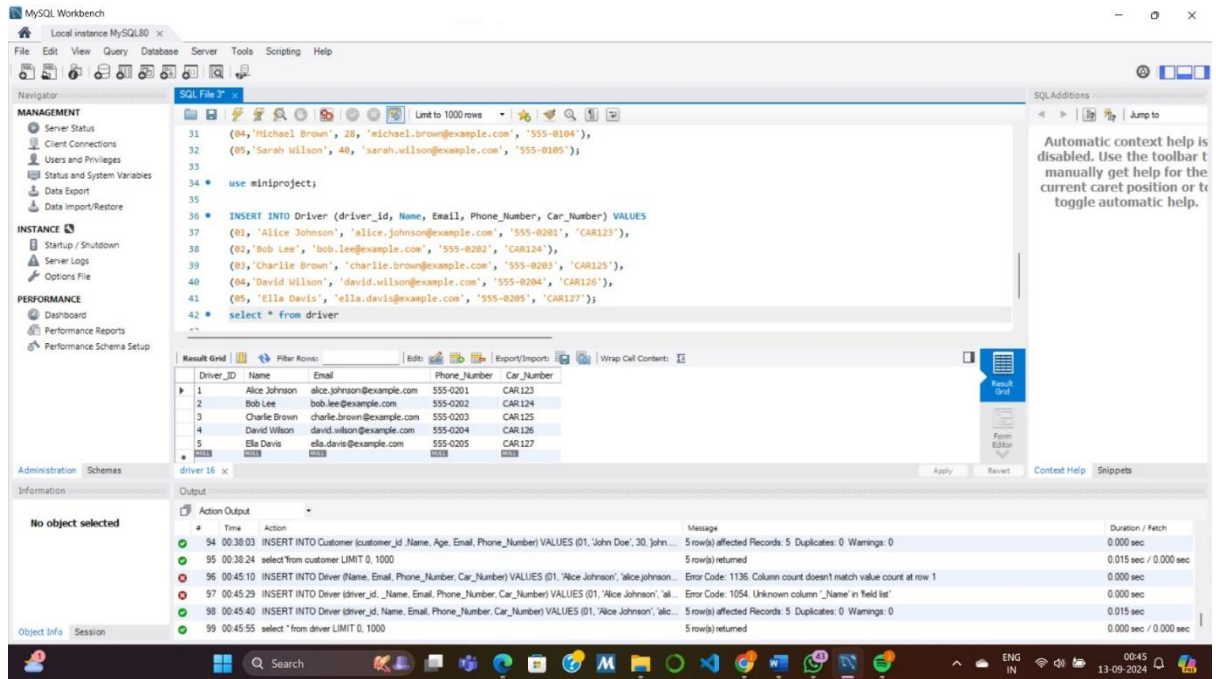


2. Insert at least FIVE records in each table using SQL.

CUSTOMER TABLE : INSERT INTO Customer (Name, Age, Email, Phone\_Number) VALUES  
('John Doe', 30, 'john.doe@example.com', '555-0101'),  
('Jane Smith', 25, 'jane.smith@example.com', '555-0102'),  
('Emily Davis', 35, 'emily.davis@example.com', '555-0103'),  
('Michael Brown', 28, 'michael.brown@example.com', '555-0104'),  
('Sarah Wilson', 40, 'sarah.wilson@example.com', '555-0105');



DRIVER TABLE : INSERT INTO Driver (Name, Email, Phone\_Number, Car\_Number) VALUES  
('Alice Johnson', 'alice.johnson@example.com', '555-0201', 'CAR123'),  
('Bob Lee', 'bob.lee@example.com', '555-0202', 'CAR124'),  
('Charlie Brown', 'charlie.brown@example.com', '555-0203', 'CAR125'),  
('David Wilson', 'david.wilson@example.com', '555-0204', 'CAR126'),  
('Ella Davis', 'ella.davis@example.com', '555-0205', 'CAR127');



BOOKING TABLE : INSERT INTO Booking (Booking\_Date, Current\_Location, Destination\_Location, Customer\_ID, Driver\_ID) VALUES

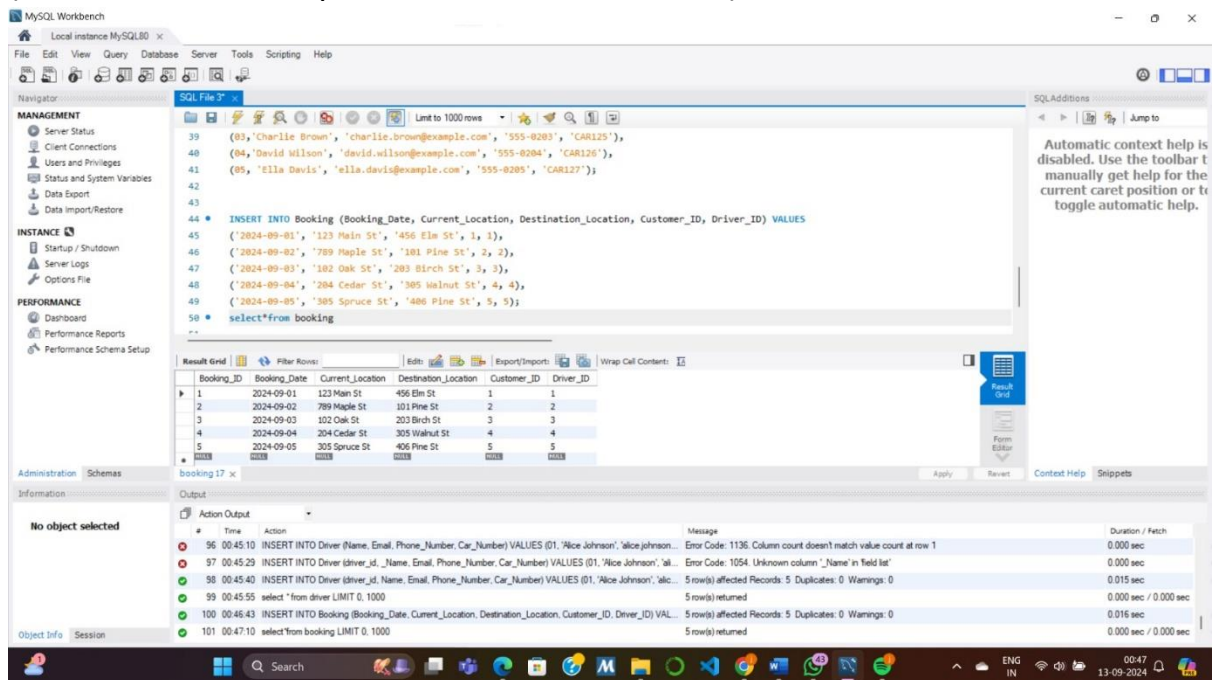
('2024-09-01', '123 Main St', '456 Elm St', 1, 1),

('2024-09-02', '789 Maple St', '101 Pine St', 2, 2),

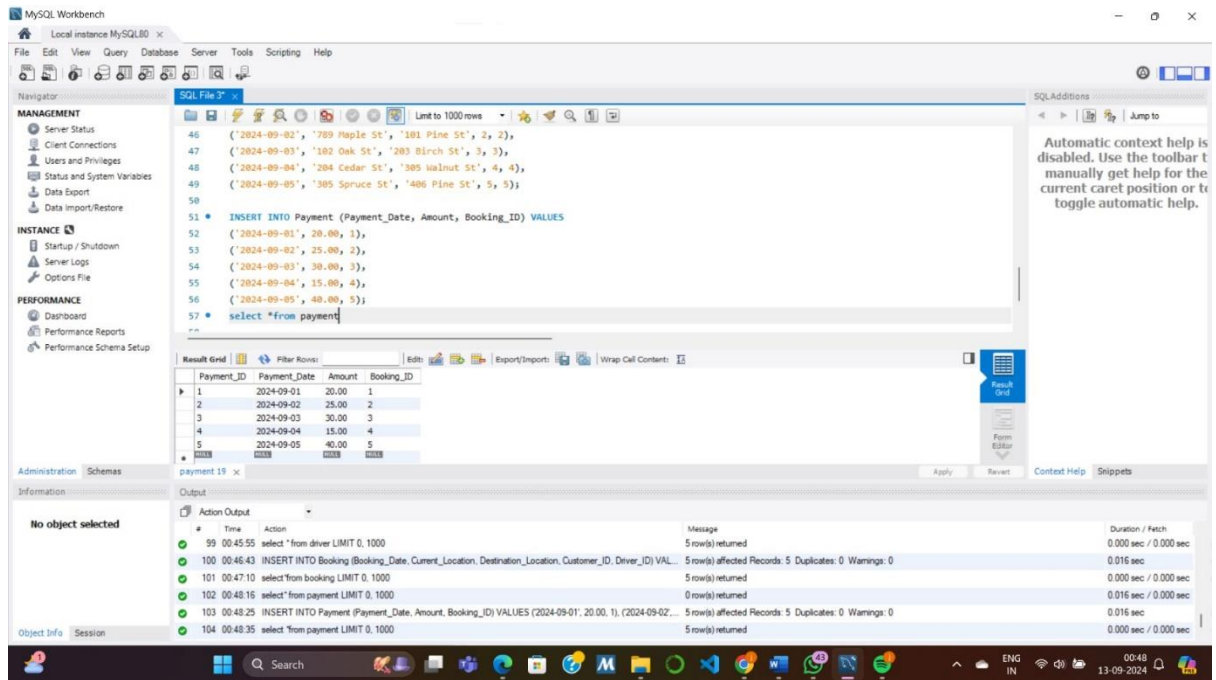
('2024-09-03', '102 Oak St', '203 Birch St', 3, 3),

('2024-09-04', '204 Cedar St', '305 Walnut St', 4, 4),

('2024-09-05', '305 Spruce St', '406 Pine St', 5, 5);

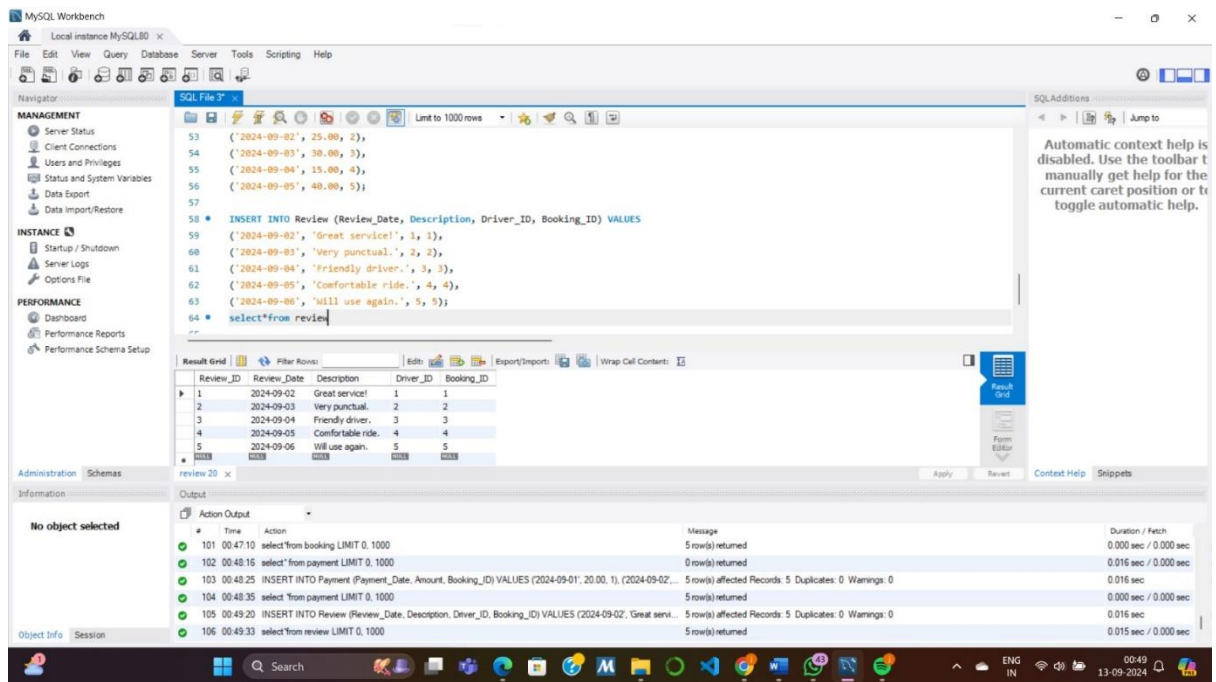


PAYMENT TABLE : INSERT INTO Payment (Payment\_Date, Amount, Booking\_ID) VALUES  
('2024-09-01', 20.00, 1),  
('2024-09-02', 25.00, 2),  
('2024-09-03', 30.00, 3),  
('2024-09-04', 15.00, 4),  
('2024-09-05', 40.00, 5);



REVIEW TABLE : INSERT INTO Review (Review\_Date, Description, Driver\_ID, Booking\_ID) VALUES  
('2024-09-02', 'Great service!', 1, 1),  
('2024-09-03', 'Very punctual.', 2, 2),  
('2024-09-04', 'Friendly driver.', 3, 3),  
('2024-09-05', 'Comfortable ride.', 4, 4),  
('2024-09-06', 'Will use again.', 5, 5);

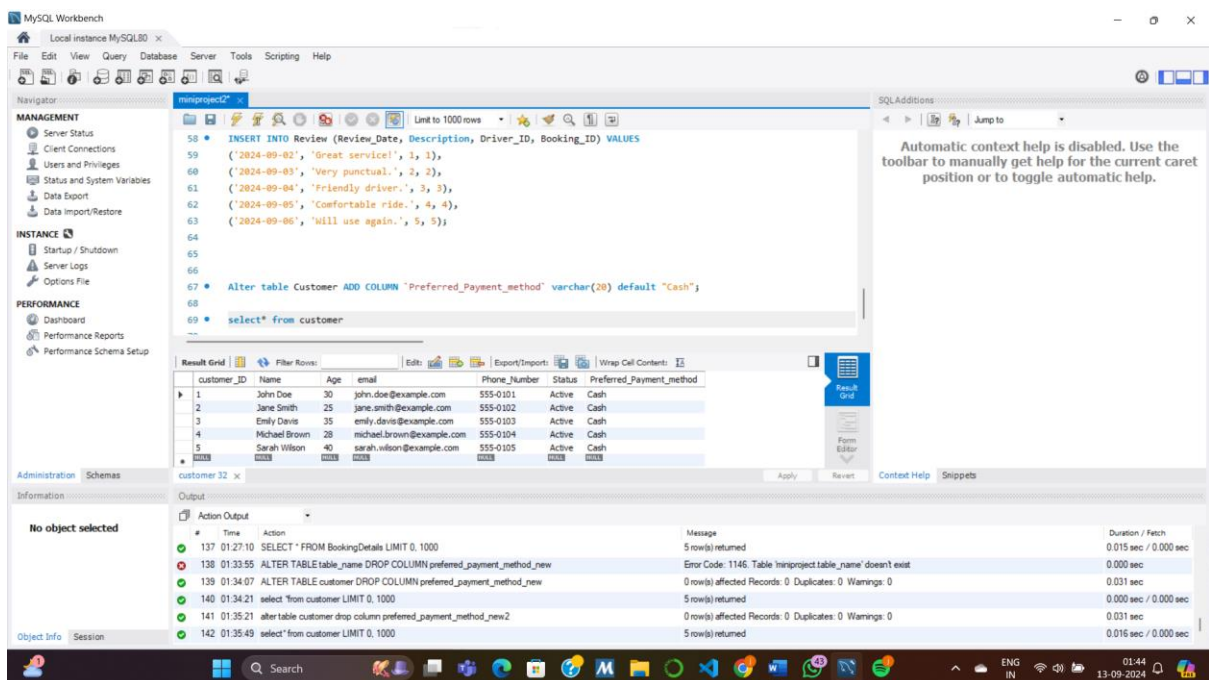




3. Write and run an SQL statement to add one additional column (attribute) in any one of the existing tables

with a default value.

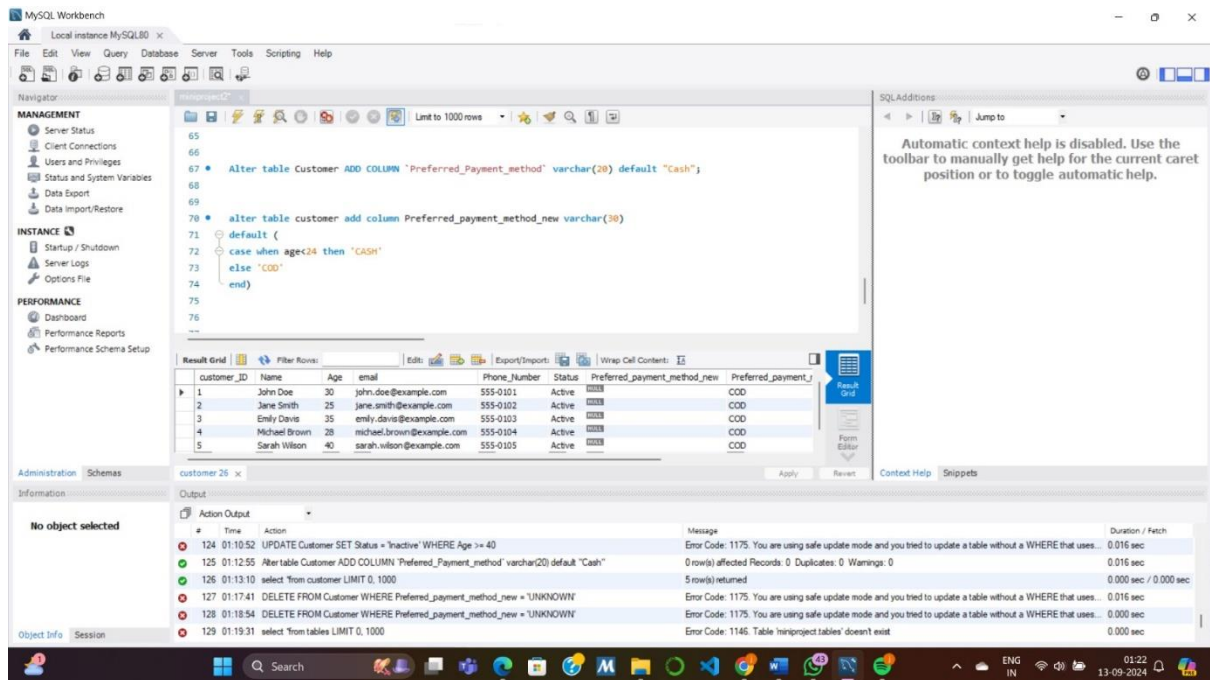
Alter table Customer ADD COLUMN `Preferred\_Payment\_method` varchar(20) default "Cash";



4. Write and run an SQL statement to update the default value of the newly added column to a different value

for certain rows based on a condition using any other column.

Alter table customer Add column Preferred\_payment\_method\_new  
varchar(30) default ( case when age



5. In this section, you are required to write SQL queries to interact with the database you implemented. Answer

each SQL question in this section with the following:

- Write an SQL query to demonstrate the use of SELECT with INNER JOIN and ORDER BY.

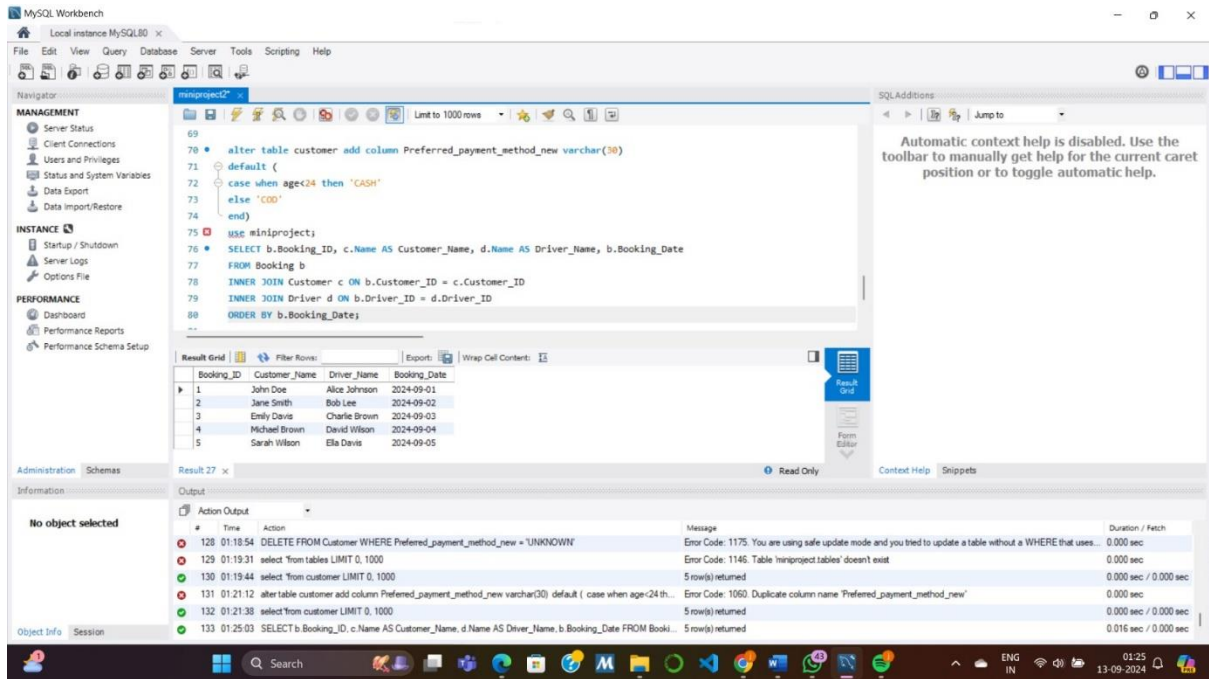
SELECT b.Booking\_ID, c.Name AS Customer\_Name, d.Name AS Driver\_Name,  
b.Booking\_Date

FROM Booking b

INNER JOIN Customer c ON b.Customer\_ID = c.Customer\_ID

INNER JOIN Driver d ON b.Driver\_ID = d.Driver\_ID

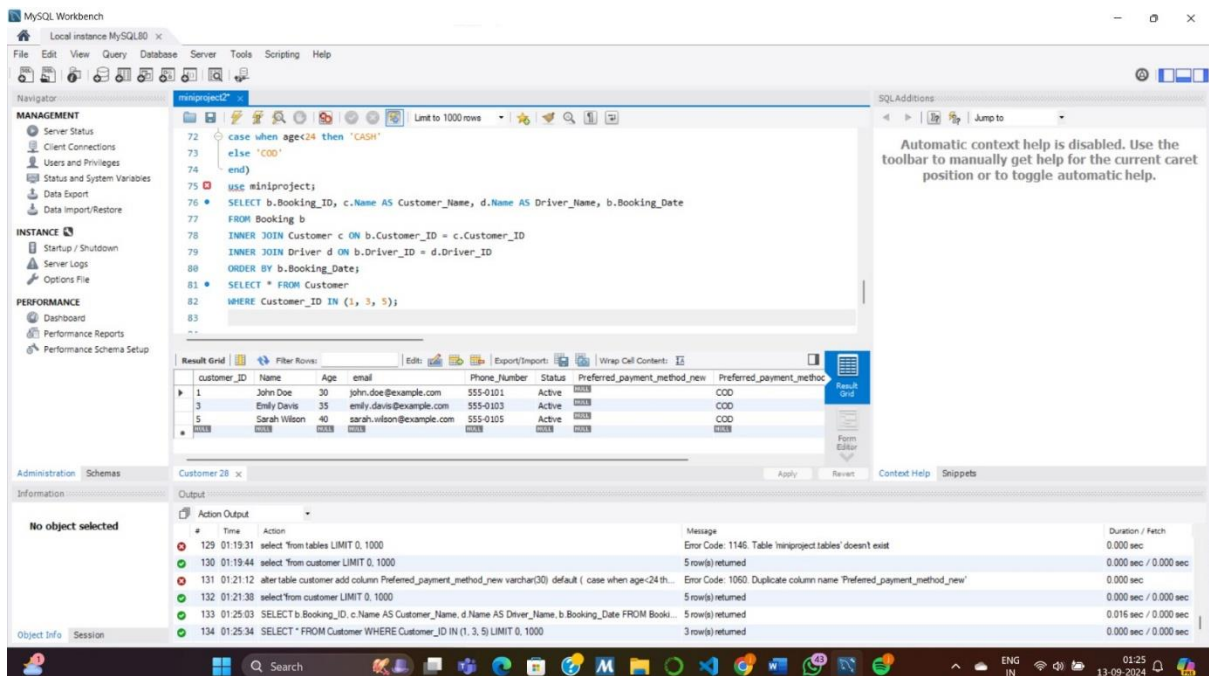
ORDER BY b.Booking\_Date;



b) Write an SQL query to demonstrate the use of SELECT with WHERE and IN.

SELECT \* FROM Customer

WHERE Customer\_ID IN (1, 3, 5);



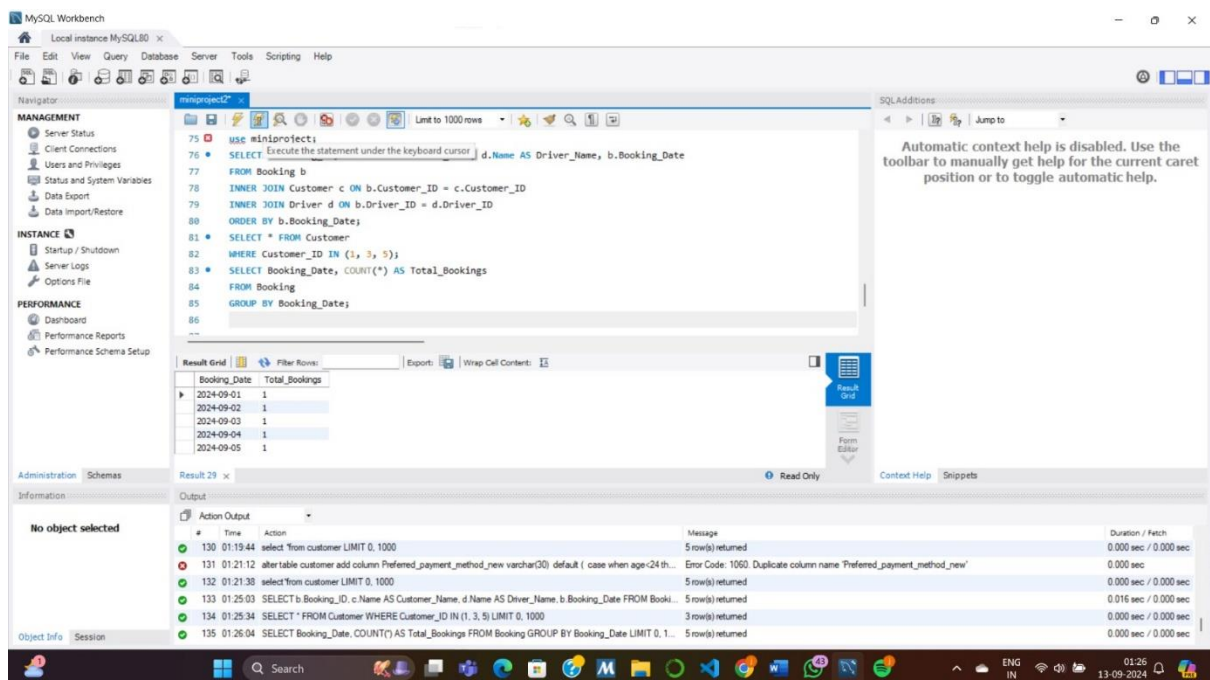
c) Write an SQL query to demonstrate the use of at least one DATE function.

SELECT Booking\_Date, COUNT(\*) AS Total\_Bookings



FROM Booking

GROUP BY Booking\_Date;



d) Write an SQL statement to create a VIEW using a SELECT statement with a JOIN. Provide the statement

to create the VIEW you want and demonstrate the output of the VIEW using 'SELECT \* FROM

<viewname>;'

CREATE VIEW BookingDetails AS

SELECT b.Booking\_ID, b.Booking\_Date, c.Name AS Customer\_Name,  
b.Current\_Location, b.Destination\_Location

FROM Booking b

INNER JOIN Customer c ON b.Customer\_ID = c.Customer\_ID;

MySQL Workbench

Local instance MySQL80

File Edit View Query Database Server Tools Scripting Help

Navigator

MANAGEMENT

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INSTANCE

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PERFORMANCE

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- Performance Reports
- Performance Schema Setup

Administration Schemas

Information

No object selected

Object Info Session

SQL Editor

```
79 INNER JOIN b ON b.Driver_ID = a.Driver_ID
80 ORDER BY a.Driver_ID
81 SELECT * FROM Customer
82 WHERE Customer_ID IN (1, 3, 5);
83 SELECT Booking_Date, COUNT(*) AS Total_Bookings
84 FROM Booking
85 GROUP BY Booking_Date;
86 CREATE VIEW BookingDetails AS
87 SELECT b.Booking_ID, b.Booking_Date, c.Name AS Customer_Name, b.Current_Location, b.Destination_Location
88 FROM Booking b
89 INNER JOIN Customer c ON b.Customer_ID = c.Customer_ID;
```

SQL Additions

Automatic context help is disabled. Use the toolbar to manually get help for the current caret position or to toggle automatic help.

Output

#	Time	Action	Message	Duration / Fetch
131	01:21:12	alter table customer add column Preferred_payment_method_new varchar(30) default ( case when age < 24 th...	Error Code: 1060. Duplicate column name 'Preferred_payment_method_new'	0.000 sec
132	01:21:38	select from customer LIMIT 0, 1000	5 row(s) returned	0.000 sec / 0.000 sec
133	01:25:03	SELECT b.Booking_ID, c.Name AS Customer_Name, d.Name AS Driver_Name, b.Booking_Date FROM Booki...	5 row(s) returned	0.016 sec / 0.000 sec
134	01:25:34	SELECT * FROM Customer WHERE Customer_ID IN (1, 3, 5) LIMIT 0, 1000	3 row(s) returned	0.000 sec / 0.000 sec
135	01:26:04	SELECT Booking_Date, COUNT(*) AS Total_Bookings FROM Booking GROUP BY Booking_Date LIMIT 0, 1...	5 row(s) returned	0.000 sec / 0.000 sec
136	01:26:34	CREATE VIEW BookingDetails AS SELECT b.Booking_ID, b.Booking_Date, c.Name AS Customer_Name, b.C...	0 row(s) affected	0.000 sec

Windows Taskbar: 13-09-2024 01:26