# SQL QUERIES FROM BEGINNING

create database New\_Project;

use New\_Project;

CREATE TABLE IF NOT EXISTS CustomerDetails(

CustomerID INT PRIMARY KEY,

FullName VARCHAR(50),

Email VARCHAR(50),

Phone VARCHAR(10),

Identity\_proof VARCHAR(100)

);

INSERT INTO CustomerDetails(CustomerID, FullName, Email, Phone, Identity\_proof)

VALUES

(1, 'Amishi Desai', 'desai014@gmail.com', '9345698768', 'Aadhar'),

(2, 'Chahel Gupta', 'chx2904@gmail.com', '9876543210', 'Passport'),

(3, 'Aneri Patel', 'ap2404@gmail.com', '7890123456', 'Driver License'),

(4, 'Demira Ramnani', 'demram23@gmail.com', '2345678901', 'Aadhar'),

(5, 'Shloka Arya', 'shloksrain@gmail.com', '8901234567', 'Passport'),

(6, 'Vansh Mehta', 'vm567@gmail.com', '3456789012', 'Driver License'),

(7, 'Shital Nagvenkar', 'shtlnad@gmail.com', '9012345678', 'Aadhar'),

(8, 'Vikram Nadkarni', 'viks01@gmail.com', '4567890123', 'Passport'),

(9, 'Aryan Shah', 'arshah56@gmail.com', '0123456789', 'Driver License'),

(10, 'Veer Patil', 'vp3til@gmail.com', '9398631146', 'Aadhar');

CREATE TABLE IF NOT EXISTS Destination (

DestinationID INT PRIMARY KEY,

DestinationName VARCHAR(50),

Distance INT,

Country VARCHAR(50));

INSERT INTO Destination (DestinationID, DestinationName, Distance, Country)

VALUES

(201, 'Mumbai', 0, 'India'),

(202, 'Pune', 200, 'India'),

(203, 'Chennai', 439, 'India'),

(204, 'Bangalore', 5674, 'India'),

(205, 'Hyderabad', 7656, 'India'),

(206, 'Delhi', 987, 'India'),

(207, 'Kolkata', 0, 'India'),

(301, 'London', 12768, 'United Kingdom'),

(302, 'Singapore', 5567, 'Singapore'),

(303, 'Dubai', 767, 'United Arab Emirates'),

(304, 'Frankfurt', 7898, 'Germany'),

(305, 'Sydney', 9783, 'Australia'),

(101, 'Ahmedabad', 0, 'India'),

(102, 'Jaipur', 838, 'India'),

(103, 'Indore', 595, 'India'),

(104, 'Lucknow',895,'India');

CREATE TABLE IF NOT EXISTS Trains(

TrainID INT PRIMARY KEY,

TrainName VARCHAR(50),

T\_DepartureTime TIME,

T\_ArrivalTime TIME,

T\_Origin VARCHAR(50),

T\_Destination VARCHAR(50),

DestinationID INT,

FOREIGN KEY (DestinationID) REFERENCES Destination(DestinationID));

INSERT INTO Trains(TrainID, TrainName, T\_DepartureTime, T\_ArrivalTime, T\_Origin, T\_Destination, DestinationID)

VALUES

(1, 'Rajdhani Express', '08:00:00', '15:00:00', 'Delhi', 'Mumbai', 201),

(2, 'Shatabdi Express', '09:00:00', '14:00:00', 'Mumbai', 'Pune', 202),

(3, 'Duronto Express', '10:00:00', '17:00:00', 'Delhi', 'Chennai', 203),

(4, 'Garib Rath Express', '11:00:00', '18:00:00', 'Kolkata', 'Bangalore', 204),

(5, 'Shatabdi Express', '12:00:00', '19:00:00', 'Chennai', 'Hyderabad', 205),

(6, 'Rajdhani Express', '13:00:00', '20:00:00', 'Bangalore', 'Delhi', 206),

(7, 'Duronto Express', '14:00:00', '21:00:00', 'Mumbai', 'Kolkata', 207),

(8, 'Garib Rath Express', '15:00:00', '22:00:00', 'Pune', 'Chennai', 203),

(9, 'Shatabdi Express', '16:00:00', '23:00:00', 'Delhi', 'Hyderabad', 205),

(10, 'Rajdhani Express', '17:00:00', '00:00:00', 'Kolkata', 'Mumbai', 201);

CREATE TABLE IF NOT EXISTS Flights(

FlightID INT PRIMARY KEY,

FlightNumber VARCHAR(10),

Airline VARCHAR(50),

FL\_DepartureTime DATETIME,

FL\_ArrivalTime DATETIME,

FL\_Origin VARCHAR(50),

FL\_Destination VARCHAR(50),

DestinationID INT,

FOREIGN KEY (DestinationID) REFERENCES Destination(DestinationID));

INSERT INTO Flights(FlightID, FlightNumber, Airline, FL\_DepartureTime, FL\_ArrivalTime, FL\_Origin, FL\_Destination, DestinationID)

VALUES

(1, 'AI101', 'Air India', '2024-03-18 08:00:00', '2024-03-18 10:00:00', 'Delhi', 'Mumbai', 201),

(2, 'AI102', 'Air India', '2024-03-18 10:00:00', '2024-03-18 12:00:00', 'Mumbai', 'Pune', 202),

(3, 'AI103', 'Air India', '2024-03-18 12:00:00', '2024-03-18 15:00:00', 'Delhi', 'Chennai', 203),

(4, 'AI104', 'Air India', '2024-03-18 14:00:00', '2024-03-18 17:00:00', 'Mumbai', 'Bangalore', 204),

(5, 'BA101', 'British Airways', '2024-03-18 16:00:00', '2024-03-18 18:00:00', 'Delhi', 'London', 301),

(6, 'SQ101', 'Singapore Airlines', '2024-03-18 18:00:00', '2024-03-18 20:00:00', 'Mumbai', 'Singapore', 302),

(7, 'EK101', 'Emirates', '2024-03-18 20:00:00', '2024-03-19 02:00:00', 'Delhi', 'Dubai', 303),

(8, 'LH101', 'Lufthansa', '2024-03-18 22:00:00', '2024-03-19 01:00:00', 'Mumbai', 'Frankfurt', 304),

(9, 'QF101', 'Qantas', '2024-03-19 01:00:00', '2024-03-19 06:00:00', 'Delhi', 'Sydney', 305),

(10, 'SQ104', 'Singapore Airlines', '2024-03-19 03:00:00', '2024-03-19 05:00:00', 'Mumbai', 'Singapore', 302);

CREATE TABLE IF NOT EXISTS Buses(

BusID INT PRIMARY KEY,

BusNumber VARCHAR(10),

Operator VARCHAR(50),

B\_DepartureTime DATETIME,

B\_ArrivalTime DATETIME,

B\_Origin VARCHAR(50),

B\_Destination VARCHAR(50),

DestinationID INT,

FOREIGN KEY (DestinationID) REFERENCES Destination(DestinationID));

INSERT INTO Buses(BusID, BusNumber, Operator, B\_DepartureTime, B\_ArrivalTime, B\_Origin, B\_Destination, DestinationID)

VALUES

(1, 'B001', 'ABC Bus Services', '2024-03-18 08:00:00', '2024-03-18 10:00:00', 'Delhi', 'Mumbai', 201),

(2, 'B002', 'XYZ Travels', '2024-03-18 10:00:00', '2024-03-18 12:00:00', 'Mumbai', 'Pune', 202),

(3, 'B003', 'RST Tours', '2024-03-18 12:00:00', '2024-03-18 15:00:00', 'Delhi', 'Chennai', 203),

(4, 'B004', 'PQR Roadways', '2024-03-18 14:00:00', '2024-03-18 17:00:00', 'Mumbai', 'Bangalore', 204),

(5, 'B005', 'LMN Travels', '2024-03-18 16:00:00', '2024-03-18 18:00:00', 'Delhi', 'Hyderabad', 205),

(6, 'B006', 'DEF Bus Lines', '2024-03-18 18:00:00', '2024-03-18 20:00:00', 'Mumbai', 'Kolkata', 206),

(7, 'B007', 'GHI Tours', '2024-03-18 20:00:00', '2024-03-19 02:00:00', 'Delhi', 'Lucknow',104),

(8, 'B008', 'JKL Bus Services', '2024-03-18 22:00:00', '2024-03-19 01:00:00', 'Mumbai', 'Ahmedabad', 101),

(9, 'B009', 'MNO Roadways', '2024-03-19 01:00:00', '2024-03-19 06:00:00', 'Delhi', 'Jaipur', 102),

(10, 'B010', 'PQR Travels', '2024-03-19 03:00:00', '2024-03-19 05:00:00', 'Mumbai', 'Indore', 103);

CREATE TABLE IF NOT EXISTS Cruise(

CruiseID INT PRIMARY KEY,

CruiseName VARCHAR(50),

CR\_DepartureTime DATETIME,

CR\_ArrivalTime DATETIME,

CR\_Origin VARCHAR(50),

CR\_Destination VARCHAR(50),

DestinationID INT,

FOREIGN KEY (DestinationID) REFERENCES Destination(DestinationID));

INSERT INTO Cruise(CruiseID, CruiseName, CR\_DepartureTime, CR\_ArrivalTime, CR\_Origin, CR\_Destination, DestinationID)

VALUES

(1, 'London to Sydney Cruise', '2024-03-18 08:00:00', '2024-03-18 20:00:00', 'London', 'Sydney', 305),

(2, 'Singapore to Dubai Cruise', '2024-03-18 10:00:00', '2024-03-18 22:00:00', 'Singapore', 'Dubai', 303),

(3, 'Frankfurt to Sydney Cruise', '2024-03-18 12:00:00', '2024-03-18 23:00:00', 'Frankfurt', 'Sydney', 305),

(4, 'Dubai to London Cruise', '2024-03-18 14:00:00', '2024-03-18 23:00:00', 'Dubai', 'London', 301),

(5, 'Sydney to Singapore Cruise', '2024-03-18 16:00:00', '2024-03-19 01:00:00', 'Sydney', 'Singapore', 302),

(6, 'London to Dubai Cruise', '2024-03-18 18:00:00', '2024-03-19 04:00:00', 'London', 'Dubai', 303),

(7, 'Singapore to Sydney Cruise', '2024-03-18 20:00:00', '2024-03-19 08:00:00', 'Singapore', 'Sydney', 305),

(8, 'Frankfurt to Dubai Cruise', '2024-03-18 22:00:00', '2024-03-19 10:00:00', 'Frankfurt', 'Dubai', 303),

(9, 'Dubai to Singapore Cruise', '2024-03-19 01:00:00', '2024-03-19 10:00:00', 'Dubai', 'Singapore', 302),

(10, 'Sydney to London Cruise', '2024-03-19 03:00:00', '2024-03-19 16:00:00', 'Sydney', 'London', 301);

CREATE TABLE IF NOT EXISTS Payment(

PaymentID INT PRIMARY KEY,

PaymentMethod VARCHAR(50),

PaymentAmount DECIMAL(10, 2),

PaymentDate DATE,

CustomerID INT,

FOREIGN KEY (CustomerID) REFERENCES CustomerDetails(CustomerID));

INSERT INTO Payment(PaymentID, PaymentMethod, PaymentAmount, PaymentDate, CustomerID)

VALUES

(101, 'Credit Card', 5000.00, '2023-01-15', 1),

(102, 'Debit Card', 3000.00, '2023-02-20', 2),

(103, 'Net Banking', 2000.00, '2023-03-25', 3),

(104, 'UPI', 4000.00, '2023-04-30', 4),

(105, 'Cash', 2500.00, '2023-05-05', 5),

(106, 'Credit Card', 3500.00, '2023-06-10', 6),

(107, 'Debit Card', 2800.00, '2023-07-15', 7),

(108, 'Net Banking', 1800.00, '2023-08-20', 8),

(109, 'UPI', 4200.00, '2023-09-25', 9),

(110, 'Cash', 2300.00, '2023-10-30', 10);

CREATE TABLE IF NOT EXISTS Car(

CarID INT PRIMARY KEY,

CarModel VARCHAR(50),

PlateNumber VARCHAR(20),

Capacity INT,

C\_Origin VARCHAR(50),

C\_Destination VARCHAR(50),

DestinationID INT,

FOREIGN KEY (DestinationID) REFERENCES Destination(DestinationID));

INSERT INTO Car(CarID, CarModel, PlateNumber, Capacity, C\_Origin, C\_Destination, DestinationID)

VALUES

(101, 'Toyota Innova', 'MH01AB1234', 7, 'Mumbai', 'Pune', 202),

(102, 'Maruti Swift', 'MH02CD5678', 5, 'Pune', 'Mumbai', 201),

(103, 'Honda City', 'MH03EF9012', 5, 'Chennai', 'Bangalore', 204),

(104, 'Hyundai i20', 'MH04GH3456', 5, 'Bangalore', 'Hyderabad', 205),

(105, 'Ford EcoSport', 'MH05IJ6789', 5, 'Hyderabad', 'Chennai', 203),

(106, 'Volkswagen Polo', 'MH06KL0123', 5, 'Delhi', 'Kolkata', 207),

(107, 'Toyota Corolla', 'MH07MN3456', 5, 'Kolkata', 'Delhi', 206),

(108, 'Renault Kwid', 'MH08OP6789', 5, 'Ahmedabad', 'Jaipur', 102),

(109, 'Honda Civic', 'MH09QR0123', 5, 'Jaipur', 'Indore', 103),

(110, 'Mahindra Scorpio', 'MH10ST3456', 7, 'Indore', 'Ahmedabad', 101);

CREATE TABLE IF NOT EXISTS Booking(

BookingID INT PRIMARY KEY,

CustomerID INT,

Booking\_status VARCHAR(20),

PaymentID INT,

Booking\_time DATETIME,

Transport VARCHAR(50) NOT NULL,

Origin VARCHAR(50) NOT NULL,

Destination VARCHAR(50) NOT NULL,

FOREIGN KEY (CustomerID) REFERENCES CustomerDetails(CustomerID),

FOREIGN KEY (PaymentID) REFERENCES Payment(PaymentID));

INSERT INTO Booking(BookingID, CustomerID, Booking\_status, PaymentID, Booking\_time, Transport, Origin, Destination)

VALUES

(1, 1, 'Confirmed', 101, '2024-03-10 08:00:00', (SELECT Operator FROM Buses WHERE DestinationID = 201), 'Delhi','Mumbai'),

(2, 2, 'Confirmed', 102, '2024-03-10 10:00:00', (SELECT PlateNumber FROM Car WHERE DestinationID = 202), 'Mumbai', 'Pune'),

(3, 3, 'Confirmed', 103, '2024-03-10 12:00:00', (SELECT FlightNumber FROM Flights WHERE DestinationID = 203), 'Delhi', 'Chennai'),

(4, 4, 'Confirmed', 104, '2024-03-10 14:00:00', (SELECT FlightNumber FROM Flights WHERE DestinationID = 204), 'Mumbai', 'Bangalore'),

(5, 5, 'Confirmed', 105, '2024-03-10 16:00:00', (SELECT CruiseName FROM Cruise WHERE DestinationID = 303 AND CR\_Origin='Singapore'), 'Singapore', 'Dubai'),

(6, 6, 'Confirmed', 106, '2024-03-10 18:00:00', (SELECT Operator FROM Buses WHERE DestinationID = 206), 'Mumbai', 'Kolkata'),

(7, 7, 'Confirmed', 107, '2024-03-10 20:00:00', (SELECT PlateNumber FROM Car WHERE DestinationID = 103), 'Jaipur', 'Indore' ),

(8, 8, 'Confirmed', 108, '2024-03-10 22:00:00', (SELECT TrainName FROM Trains WHERE DestinationID = 204), 'Kolkata', 'Bangalore'),

(9, 9, 'Confirmed', 109, '2024-03-11 01:00:00', (SELECT FlightNumber FROM Flights WHERE DestinationID = 203), 'Delhi', 'Chennai'),

(10, 10, 'Confirmed', 110, '2024-03-11 03:00:00', (SELECT CruiseName FROM Cruise WHERE DestinationID = 301 AND CR\_Origin='Sydney'), 'Sydney', 'London');

UPDATE CustomerDetails SET Identity\_proof = 'Aadhar' WHERE CustomerID = 2;

SELECT \* FROM CustomerDetails;

CREATE TABLE CustomerTravelDoc AS SELECT CustomerID, FullName, Identity\_proof FROM CustomerDetails;

SELECT \* FROM CustomerTravelDoc;

ALTER TABLE CustomerTravelDoc RENAME TO Customer\_documents;

SELECT \* FROM Customer\_documents;

ALTER TABLE CustomerDetails

ADD CONSTRAINT CK\_email\_format CHECK (Email LIKE '%@gmail.com');

ALTER TABLE Booking

MODIFY COLUMN Booking\_status VARCHAR(20) NOT NULL DEFAULT 'Pending';

SELECT \* FROM Booking;

UPDATE Payment SET PaymentAmount = PaymentAmount \* 1.1 WHERE CustomerID IN (1, 3, 5) AND PaymentMethod = 'Credit Card';

SELECT \* FROM Payment;

SELECT \* FROM Flights WHERE Airline LIKE 'A%A';

SET SQL\_SAFE\_UPDATES = 0;

UPDATE Destination SET Distance = 500 WHERE Distance = 0;

SET SQL\_SAFE\_UPDATES = 1;

SELECT \* FROM Destination WHERE Country = 'India' AND Distance BETWEEN 500 AND 1500;

SELECT DISTINCT Country FROM Destination;

DESC Booking;

SELECT b1.BookingID AS BookingID1,

b1.CustomerID AS CustomerID1,

b1.Booking\_status AS BookingStatus1,

b2.BookingID AS BookingID2,

b2.CustomerID AS CustomerID2,

b2.Booking\_status AS BookingStatus2

FROM Booking b1, Booking b2

WHERE b1.Origin = b2.Destination;

SELECT DISTINCT d.DestinationName, t.TrainName AS Train, f.FlightNumber AS Flight, b.BusNumber AS Bus, c.CruiseName AS Cruise

FROM Destination d LEFT JOIN Trains t ON d.DestinationID = t.DestinationID

LEFT JOIN Flights a ON d.DestinationID = f.DestinationID

LEFT JOIN Buses b ON d.DestinationID = b.DestinationID

LEFT JOIN Cruise c ON d.DestinationID = c.DestinationID

WHERE d.DestinationName = 'Singapore';

SELECT

d.DestinationName,

GROUP\_CONCAT(DISTINCT t.TrainName) AS Train,

GROUP\_CONCAT(DISTINCT f.FlightNumber) AS Flight,

GROUP\_CONCAT(DISTINCT b.BusNumber) AS Bus,

GROUP\_CONCAT(DISTINCT c.CruiseName) AS Cruise

FROM

Destination d

LEFT JOIN

Trains t ON d.DestinationID = t.DestinationID

LEFT JOIN

Flights f ON d.DestinationID = f.DestinationID

LEFT JOIN

Buses b ON d.DestinationID = b.DestinationID

LEFT JOIN

Cruise c ON d.DestinationID = c.DestinationID

WHERE

d.DestinationName = 'Singapore'

GROUP BY

d.DestinationName;

SELECT B.BookingID, B.CustomerID, B.Booking\_status,B.PaymentID, B.Booking\_time, B.Transport, B.Origin, B.Destination, C.FullName,C.Email, C.Phone, C.Identity\_proof

FROM Booking AS B JOIN CustomerDetails AS C ON B.CustomerID = C.CustomerID

JOIN Payment AS P ON B.PaymentID = P.PaymentID

WHERE P.PaymentMethod = 'Credit Card';

SELECT C.CustomerID, C.FullName, C.Email, C.Phone, C.Identity\_proof, P.PaymentAmount FROM Payment AS P

JOIN CustomerDetails AS C ON P.CustomerID = C.CustomerID ORDER BY P.PaymentAmount DESC;

SELECT COUNT(\*) AS Total\_Mumbai\_flights FROM Flights WHERE FL\_Origin = 'Mumbai' OR FL\_Destination = 'Mumbai';

SELECT T\_Destination AS Destination FROM Trains INTERSECT

SELECT Fl\_Destination AS Destination FROM Flights;

SELECT B\_Destination FROM Buses WHERE B\_Destination NOT IN (SELECT C\_Destination FROM Car);

SELECT CustomerID, COUNT(\*) AS CustomerBookings FROM Booking GROUP BY CustomerID HAVING COUNT(\*) <= 2;

SELECT SUM(PaymentAmount) AS Total\_Income FROM Payment;

CREATE VIEW Booking\_Summary AS

SELECT COUNT(\*) AS TotalBookings,SUM(p.PaymentAmount) AS TotalAmountPaid, AVG(p.PaymentAmount) AS AverageAmount

FROM Booking b JOIN Payment p ON b.PaymentID = p.PaymentID;

SELECT \* FROM Booking\_Summary;

CREATE VIEW DestinationS\_Booked AS

SELECT Destination, COUNT(\*) AS BookingCount FROM Booking GROUP BY Destination;

SELECT \* FROM DestinationS\_Booked;

SELECT Destination.DestinationID, Destination.DestinationName FROM Destination

LEFT JOIN Booking ON Destination.DestinationID = Booking.Destination

WHERE Booking.Destination IS NULL;

SET SQL\_SAFE\_UPDATES = 0;

DELETE FROM Booking WHERE Transport IN (SELECT TrainName FROM Trains);

SET SQL\_SAFE\_UPDATES = 1;

SELECT \* FROM Booking;

SELECT Transport, COUNT(\*) AS BookingCount

FROM Booking GROUP BY Transport ORDER BY COUNT(\*) DESC LIMIT 1;

SELECT \* FROM Destination;