ENTITY RELATION DIAGRAM (ERD):

Customer attributes: C-ID, Email, Phone, Passport-Num, Full-Name

Airport attributes: Airport-ID, Name, City, Country

Booking attributes: C-ID, Flight-ID, Seat-Num, Booking-Date, Booking-ID

Flight attributes: Flight-ID, Flight-Num, D-A-ID, A-A-ID, D-Time, A-Time

Payment attributes: Pay-ID, Booking-ID, Amount, Pay-Date

Seats attributes: Flight-ID, Seat-Num, IsAvailable

Relationships:
- Customer 1 — * Booking
- Booking * — 1 Flight
- Airport 1 — * Flight (origin)
- Airport 1 — * Flight (destination)
- Booking 1 — 1 Payment
- Flight 1 — * Seats

* D-A-ID: DepartureAirportID   * D-Time : DepartureTime

* A-A-ID : ArrivalAirportID   * A-Time : ArrivalTime   * C-ID : CustomerID

DATA DEFINITION LANGUAGE (DDL):

```
1   ⊖   CREATE TABLE Customer (
2         CustomerID INT PRIMARY KEY,
3         FullName VARCHAR(100),
4         Email VARCHAR(100) UNIQUE,
5         Phone VARCHAR(20) UNIQUE NOT NULL,
```

SCHEMAS

🔍 Filter objects

▼ 🗄 flight_booking_management
  ▼ 🗇 Tables
    ▶ ▦ customer
    🗇 Views
    🗇 Stored Procedures
    🗇 Functions

Limit to 1000 ro

```
1   ⊖   CREATE TABLE Customer (
2         CustomerID INT PRIMARY KEY,
3         FullName VARCHAR(100),
4         Email VARCHAR(100) UNIQUE,
5         Phone VARCHAR(20) UNIQUE NOT NULL,
6         PassportNumber VARCHAR(20) UNIQUE NOT NULL
7       );
```

```
1 ● ⊖   CREATE TABLE Airport (
2         AirportID INT PRIMARY KEY,
3         Name VARCHAR(100),
4         City VARCHAR(50),
5         Country VARCHAR(50)
6       );
```

SCHEMAS

🔍 Filter objects

▼ 🗄 flight_booking_management
  ▼ 🗇 Tables
    ▶ ▦ airport
    ▶ ▦ customer
    🗇 Views
    🗇 Stored Procedures
    🗇 Functions

```
1 ● ⊖   CREATE TABLE Airport (
2         AirportID INT PRIMARY KEY,
3         Name VARCHAR(100),
4         City VARCHAR(50),
5         Country VARCHAR(50)
6       );
```

```sql
CREATE TABLE Flight (
    FlightID INT PRIMARY KEY,
    FlightNumber VARCHAR(10) UNIQUE,
    DepartureAirportID INT,
    ArrivalAirportID INT,
    DepartureTime DATETIME,
    ArrivalTime DATETIME,
    CONSTRAINT FK_DepartureAirport FOREIGN KEY (DepartureAirportID) REFERENCES Airport(AirportID),
    CONSTRAINT FK_ArrivalAirport FOREIGN KEY (ArrivalAirportID) REFERENCES Airport(AirportID)
);
```
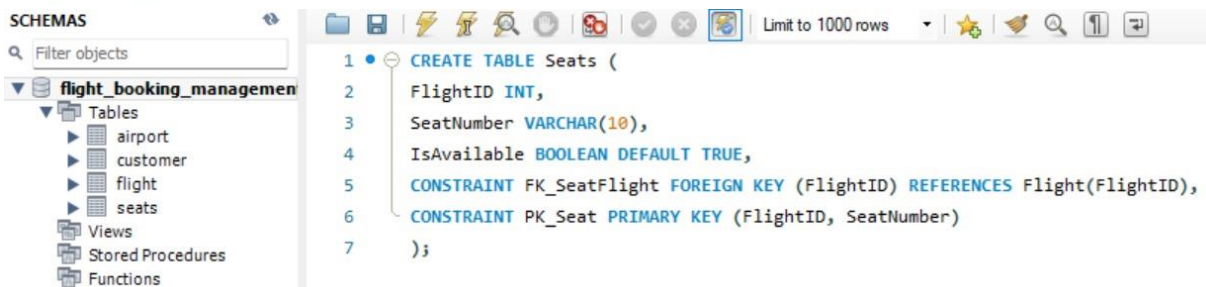
SCHEMAS — flight_booking_management
Tables: airport, customer, flight
Views, Stored Procedures, Functions

```sql
CREATE TABLE Flight (
    FlightID INT PRIMARY KEY,
    FlightNumber VARCHAR(10) UNIQUE,
    DepartureAirportID INT,
    ArrivalAirportID INT,
    DepartureTime DATETIME,
    ArrivalTime DATETIME,
    CONSTRAINT FK_DepartureAirport FOREIGN KEY (DepartureAirportID) REFERENCES Airport(AirportID),
    CONSTRAINT FK_ArrivalAirport FOREIGN KEY (ArrivalAirportID) REFERENCES Airport(AirportID)
);
```

```sql
CREATE TABLE Seats (
    FlightID INT,
    SeatNumber VARCHAR(10),
    IsAvailable BOOLEAN DEFAULT TRUE,
    CONSTRAINT FK_SeatFlight FOREIGN KEY (FlightID) REFERENCES Flight(FlightID),
    CONSTRAINT PK_Seat PRIMARY KEY (FlightID, SeatNumber)
);
```
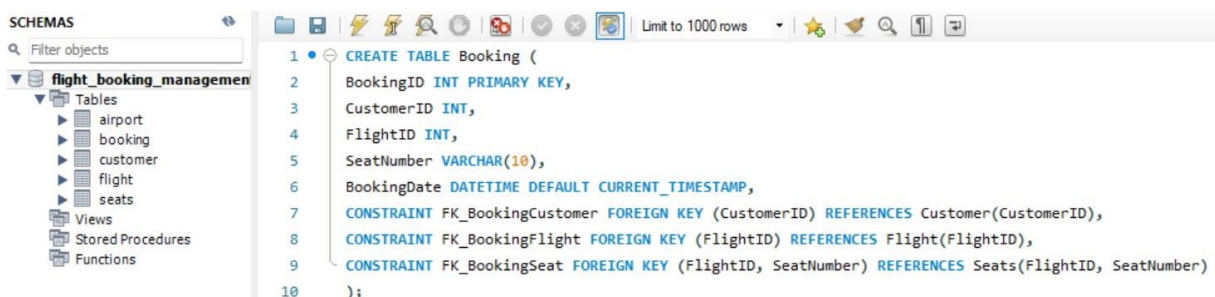
SCHEMAS — flight_booking_management
Tables: airport, customer, flight, seats
Views, Stored Procedures, Functions

```sql
CREATE TABLE Seats (
    FlightID INT,
    SeatNumber VARCHAR(10),
    IsAvailable BOOLEAN DEFAULT TRUE,
    CONSTRAINT FK_SeatFlight FOREIGN KEY (FlightID) REFERENCES Flight(FlightID),
    CONSTRAINT PK_Seat PRIMARY KEY (FlightID, SeatNumber)
);
```

```sql
CREATE TABLE Booking (
    BookingID INT PRIMARY KEY,
    CustomerID INT,
    FlightID INT,
    SeatNumber VARCHAR(10),
    BookingDate DATETIME DEFAULT CURRENT_TIMESTAMP,
    CONSTRAINT FK_BookingCustomer FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID),
    CONSTRAINT FK_BookingFlight FOREIGN KEY (FlightID) REFERENCES Flight(FlightID),
    CONSTRAINT FK_BookingSeat FOREIGN KEY (FlightID, SeatNumber) REFERENCES Seats(FlightID, SeatNumber)
);
```

SCHEMAS — flight_booking_management
Tables: airport, booking, customer, flight, seats
Views, Stored Procedures, Functions

```sql
CREATE TABLE Booking (
    BookingID INT PRIMARY KEY,
    CustomerID INT,
    FlightID INT,
    SeatNumber VARCHAR(10),
    BookingDate DATETIME DEFAULT CURRENT_TIMESTAMP,
    CONSTRAINT FK_BookingCustomer FOREIGN KEY (CustomerID) REFERENCES Customer(CustomerID),
    CONSTRAINT FK_BookingFlight FOREIGN KEY (FlightID) REFERENCES Flight(FlightID),
    CONSTRAINT FK_BookingSeat FOREIGN KEY (FlightID, SeatNumber) REFERENCES Seats(FlightID, SeatNumber)
);
```
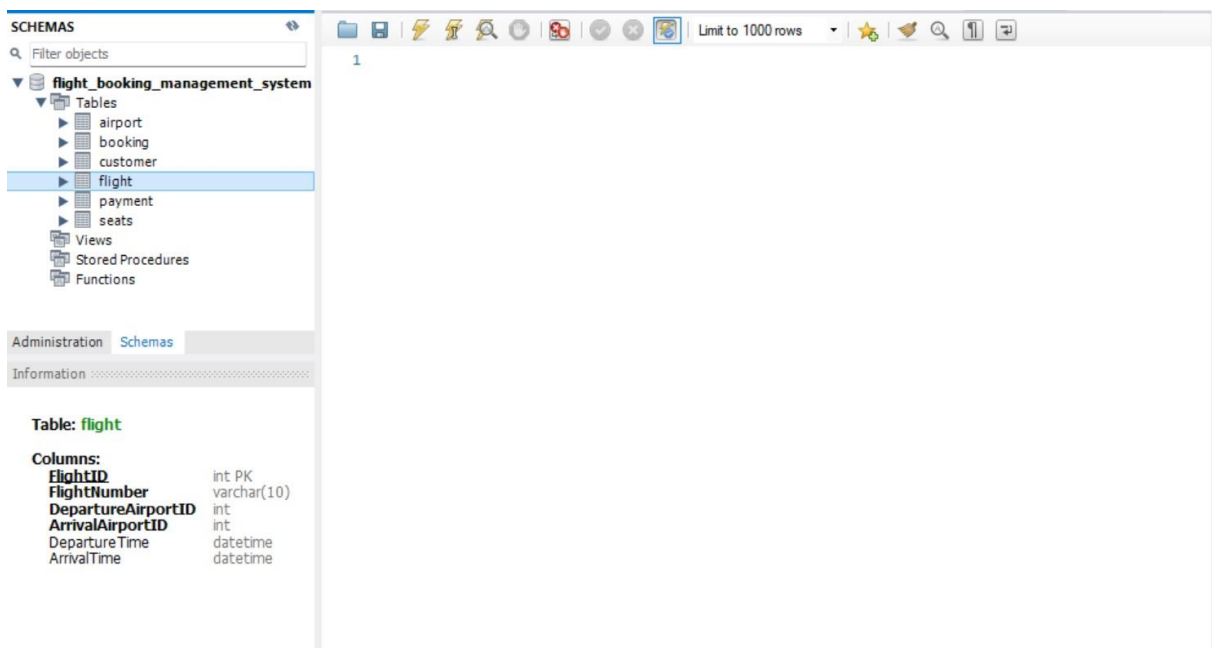
```
1  •  ⊖  CREATE TABLE Payment (
2          PaymentID INT PRIMARY KEY,
3          BookingID INT,
4          Amount DECIMAL(10, 2),
5          PaymentDate DATETIME,
6          CONSTRAINT FK_PaymentBooking FOREIGN KEY (BookingID) REFERENCES Booking(BookingID),
7          CONSTRAINT CK_PositiveAmount CHECK (Amount > 0)
8      );
```
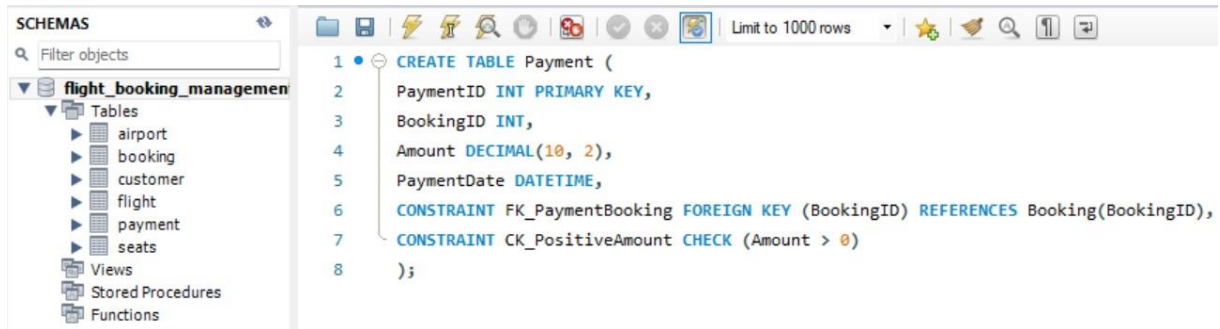

DATA MANIPULATION LANGUAGE (DML):


```
1      ALTER TABLE Flight
2      ADD CONSTRAINT CK_ArrivalTime CHECK (ArrivalTime > DepartureTime);
```

Table: airport

Columns:

AirportID	int PK
Name	varchar(90)
City	varchar(50)
Country	varchar(50)

```
1 •    ALTER TABLE airport
2      MODIFY name VARCHAR(95);
```

Table: airport

Columns:

AirportID	int PK
name	varchar(95)
City	varchar(50)
Country	varchar(50)

SCHEMAS

Filter objects

▼ flight_booking_management_syste
  ▼ Tables
    ► airport
    ► booking
    ▼ customer
      ▼ Columns
        ◆ CustomerID
        ◆ FullName
        ◆ Email
        ◆ Phone
        ◆ PassportNumber
        ◆ Address

```
1 •    ALTER TABLE Customer
2      ADD Address VARCHAR(255);
```

SCHEMAS

Filter objects

▼ flight_booking_management_syste
  ▼ Tables
    ► airport
    ► booking
    ▼ customer
      ▼ Columns
        ◆ CustomerID
        ◆ FullName
        ◆ Email
        ◆ Phone
        ◆ PassportNumber

```
1 •    ALTER TABLE Customer
2      DROP COLUMN Address;
```

INSERTING VALUES (DML):

```sql
1    INSERT INTO Customer (CustomerID, FullName, Email, Phone, PassportNumber) VALUES
2    (1, 'John Doe', NULL, '555-9821', 'P987654321'),
3    (2, 'Jane Smith', 'jane.smith@gmail.com', '555-1342', 'P123456789'),
4    (3, 'Mike Johnson', 'mike.johnson@gmail.com', '555-2394', 'P543210987'),
5    (4, 'Emily Davis', NULL, '555-9876', 'P654321012'),
6    (5, 'Ali Brown', 'ali.brown@gmail.com', '555-4712', 'P876543210'),
7    (6, 'Linda White', NULL, '555-6235', 'P567890123'),
8    (7, 'David Taylor', 'david.taylor@gmail.com', '555-7598', 'P234567890'),
9    (8, 'Susan Moore', 'susan.moore@gmail.com', '555-8510', 'P345678901'),
10   (9, 'James Harris', NULL, '555-4723', 'P210987654'),
11   (10, 'Maryam Martin', 'maryam.martin@gmail.com', '555-5921', 'P123890765'),
12   (11, 'Robert Thompson', 'robert.thompson@gmail.com', '555-3467', 'P678901234'),
13   (12, 'Patricia Garcia', NULL, '555-8674', 'P234567321'),
14   (13, 'Charles Martinez', 'charles.martinez@gmail.com', '555-7198', 'P876543321'),
15   (14, 'Barbara Robinson', 'barbara.robinson@gmail.com', '555-6245', 'P345987654'),
16   (15, 'Thomas Clark', 'thomas.clark@gmail.com', '555-8709', 'P567890432'),
17   (16, 'Jessica Rodriguez', NULL, '555-7364', 'P234890765'),
18   (17, 'Christopher Lewis', 'christopher.lewis@gmail.com', '555-8246', 'P678903456'),
19   (18, 'Sarah Hall', 'sarah.hall@gmail.com', '555-5142', 'P987654567'),
20   (19, 'Daniel Walker', NULL, '555-3948', 'P432109876'),
21   (20, 'Nancy Hall', 'nancy.hall@gmail.com', '555-2765', 'P123456432');
```

```sql
1 •  SELECT * FROM flight_booking_management_system.customer;
```

CustomerID	FullName	Email	Phone	PassportNumber
1	John Doe	NULL	555-9821	P987654321
2	Jane Smith	jane.smith@gmail.com	555-1342	P123456789
3	Mike Johnson	mike.johnson@gmail.com	555-2394	P543210987
4	Emily Davis	NULL	555-9876	P654321012
5	Ali Brown	ali.brown@gmail.com	555-4712	P876543210
6	Linda White	NULL	555-6235	P567890123
7	David Taylor	david.taylor@gmail.com	555-7598	P234567890
8	Susan Moore	susan.moore@gmail.com	555-8510	P345678901
9	James Harris	NULL	555-4723	P210987654
10	Maryam Martin	maryam.martin@gmail.com	555-5921	P123890765
11	Robert Thomp...	robert.thompson@gmail.com	555-3467	P678901234
12	Patricia Garcia	NULL	555-8674	P234567321
13	Charles Martinez	charles.martinez@gmail.com	555-7198	P876543321
14	Barbara Robin...	barbara.robinson@gmail.c...	555-6245	P345987654
15	Thomas Clark	thomas.clark@gmail.com	555-8709	P567890432
16	Jessica Rodrig...	NULL	555-7364	P234890765
17	Christopher L...	christopher.lewis@gmail.com	555-8246	P678903456
18	Sarah Hall	sarah.hall@gmail.com	555-5142	P987654567

```sql
1    INSERT INTO Airport (AirportID, Name, City, Country) VALUES
2    (1, 'Melbourne Airport', 'Melbourne', 'Australia'),
3    (2, 'Gaza International Airport', 'Gaza', 'Palestine'),
4    (3, 'King Khalid International Airport', 'Riyadh', 'Saudi Arabia'),
5    (4, 'Esenboğa Airport', 'Ankara', 'Turkey'),
6    (5, 'Prince Mohammad bin Abdulaziz International Airport', 'Medina', 'Saudi Arabia'),
7    (6, 'Perth Airport', 'Perth', 'Australia'),
8    (7, 'Rafah International Airport', 'Rafah', 'Palestine'),
9    (8, 'Adana Şakirpaşa Airport', 'Adana', 'Turkey'),
10   (9, 'Adelaide Airport', 'Adelaide', 'Australia'),
11   (10, 'Abha International Airport', 'Abha', 'Saudi Arabia'),
12   (11, 'Istanbul Airport', 'Istanbul', 'Turkey'),
13   (12, 'Brisbane Airport', 'Brisbane', 'Australia'),
14   (13, 'King Abdulaziz International Airport', 'Jeddah', 'Saudi Arabia'),
15   (14, 'Sabiha Gökçen International Airport', 'Istanbul', 'Turkey'),
16   (15, 'Sydney Kingsford Smith Airport', 'Sydney', 'Australia');
```

```sql
1 ●  SELECT * FROM flight_booking_management_system.airport;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: |

AirportID	Name	City	Country
1	Melbourne Airport	Melbourne	Australia
2	Gaza International Airport	Gaza	Palestine
3	King Khalid International Airport	Riyadh	Saudi Arabia
4	Esenboğa Airport	Ankara	Turkey
5	Prince Mohammad bin Abdulaziz International Ai...	Medina	Saudi Arabia
6	Perth Airport	Perth	Australia
7	Rafah International Airport	Rafah	Palestine
8	Adana Şakirpaşa Airport	Adana	Turkey
9	Adelaide Airport	Adelaide	Australia
10	Abha International Airport	Abha	Saudi Arabia
11	Istanbul Airport	Istanbul	Turkey
12	Brisbane Airport	Brisbane	Australia
13	King Abdulaziz International Airport	Jeddah	Saudi Arabia
14	Sabiha Gökçen International Airport	Istanbul	Turkey
15	Sydney Kingsford Smith Airport	Sydney	Australia
NULL	NULL	NULL	NULL

```sql
INSERT INTO Flight (FlightID, FlightNumber, DepartureAirportID, ArrivalAirportID, DepartureTi
(1, 'AU1001', 1, 3, '2025-05-15 06:20:00', '2025-05-15 14:10:00'),
(2, 'TK1002', 4, 11, '2025-06-03 13:30:00', '2025-06-03 16:00:00'),
(3, 'SA1003', 13, 6, '2025-05-20 22:10:00', '2025-05-21 06:45:00'),
(4, 'PL1004', 2, 5, '2025-06-01 09:00:00', '2025-06-01 14:25:00'),
(5, 'AU1005', 9, 10, '2025-06-10 18:00:00', '2025-06-11 01:30:00'),
(6, 'TK1006', 14, 8, '2025-05-28 07:40:00', '2025-05-28 10:00:00'),
(7, 'SA1007', 5, 12, '2025-05-30 11:00:00', '2025-05-30 19:15:00'),
(8, 'PL1008', 7, 13, '2025-06-05 04:30:00', '2025-06-05 09:55:00'),
(9, 'AU1009', 15, 4, '2025-06-02 15:50:00', '2025-06-02 21:20:00'),
(10, 'TK1010', 11, 1, '2025-06-08 17:10:00', '2025-06-09 00:05:00'),
(11, 'SA1011', 3, 9, '2025-05-25 08:15:00', '2025-05-25 14:20:00'),
(12, 'AU1012', 6, 2, '2025-06-04 23:10:00', '2025-06-05 05:35:00'),
(13, 'TK1013', 8, 14, '2025-06-06 10:00:00', '2025-06-06 12:45:00'),
(14, 'PL1014', 2, 7, '2025-05-26 06:30:00', '2025-05-26 07:20:00'),
(15, 'SA1015', 10, 15, '2025-06-09 20:30:00', '2025-06-10 04:00:00');
```

```sql
SELECT * FROM flight_booking_management_system.flight;
```

FlightID	FlightNumber	DepartureAirportID	ArrivalAirportID	DepartureTime	ArrivalTime
1	AU1001	1	3	2025-05-15 06:20:00	2025-05-15 14:10:00
2	TK1002	4	11	2025-06-03 13:30:00	2025-06-03 16:00:00
3	SA1003	13	6	2025-05-20 22:10:00	2025-05-21 06:45:00
4	PL1004	2	5	2025-06-01 09:00:00	2025-06-01 14:25:00
5	AU1005	9	10	2025-06-10 18:00:00	2025-06-11 01:30:00
6	TK1006	14	8	2025-05-28 07:40:00	2025-05-28 10:00:00
7	SA1007	5	12	2025-05-30 11:00:00	2025-05-30 19:15:00
8	PL1008	7	13	2025-06-05 04:30:00	2025-06-05 09:55:00
9	AU1009	15	4	2025-06-02 15:50:00	2025-06-02 21:20:00
10	TK1010	11	1	2025-06-08 17:10:00	2025-06-09 00:05:00
11	SA1011	3	9	2025-05-25 08:15:00	2025-05-25 14:20:00
12	AU1012	6	2	2025-06-04 23:10:00	2025-06-05 05:35:00
13	TK1013	8	14	2025-06-06 10:00:00	2025-06-06 12:45:00
14	PL1014	2	7	2025-05-26 06:30:00	2025-05-26 07:20:00
15	SA1015	10	15	2025-06-09 20:30:00	2025-06-10 04:00:00
NULL	NULL	NULL	NULL	NULL	NULL

```sql
1    INSERT INTO Seats (FlightID, SeatNumber, IsAvailable) VALUES
2    (1, 'A1', TRUE), (1, 'B2', FALSE), (1, 'C3', TRUE), (1, 'D4', TRUE), (1, 'E5', TRUE),
3    (1, 'F6', TRUE), (1, 'G7', TRUE), (1, 'H8', FALSE), (1, 'I9', FALSE), (1, 'J10', TRUE),
4    (2, 'A1', TRUE), (2, 'B2', TRUE), (2, 'C3', TRUE), (2, 'D4', FALSE), (2, 'E5', TRUE),
5    (2, 'F6', TRUE), (2, 'G7', FALSE), (2, 'H8', TRUE), (2, 'I9', TRUE), (2, 'J10', TRUE),
6    (3, 'A1', TRUE), (3, 'B2', FALSE), (3, 'C3', TRUE), (3, 'D4', TRUE), (3, 'E5', TRUE),
7    (3, 'F6', FALSE), (3, 'G7', TRUE), (3, 'H8', TRUE), (3, 'I9', TRUE), (3, 'J10', TRUE),
8    (4, 'A1', TRUE), (4, 'B2', FALSE), (4, 'C3', TRUE), (4, 'D4', TRUE), (4, 'E5', TRUE),
9    (4, 'F6', TRUE), (4, 'G7', TRUE), (4, 'H8', FALSE), (4, 'I9', TRUE), (4, 'J10', FALSE),
10   (5, 'A1', TRUE), (5, 'B2', FALSE), (5, 'C3', TRUE), (5, 'D4', TRUE), (5, 'E5', TRUE),
11   (5, 'F6', TRUE), (5, 'G7', TRUE), (5, 'H8', TRUE), (5, 'I9', TRUE), (5, 'J10', FALSE),
12   (6, 'A1', TRUE), (6, 'B2', TRUE), (6, 'C3', TRUE), (6, 'D4', TRUE), (6, 'E5', TRUE),
13   (6, 'F6', TRUE), (6, 'G7', TRUE), (6, 'H8', TRUE), (6, 'I9', TRUE), (6, 'J10', TRUE),
14   (7, 'A1', TRUE), (7, 'B2', FALSE), (7, 'C3', TRUE), (7, 'D4', TRUE), (7, 'E5', TRUE),
15   (7, 'F6', TRUE), (7, 'G7', TRUE), (7, 'H8', FALSE), (7, 'I9', TRUE), (7, 'J10', TRUE),
16   (8, 'A1', TRUE), (8, 'B2', TRUE), (8, 'C3', TRUE), (8, 'D4', TRUE), (8, 'E5', TRUE),
17   (8, 'F6', TRUE), (8, 'G7', TRUE), (8, 'H8', TRUE), (8, 'I9', TRUE), (8, 'J10', TRUE),
18   (9, 'A1', TRUE), (9, 'B2', TRUE), (9, 'C3', TRUE), (9, 'D4', TRUE), (9, 'E5', FALSE),
19   (9, 'F6', TRUE), (9, 'G7', FALSE), (9, 'H8', FALSE), (9, 'I9', FALSE), (9, 'J10', FALSE),
20   (10, 'A1', TRUE), (10, 'B2', TRUE), (10, 'C3', TRUE), (10, 'D4', TRUE), (10, 'E5', TRUE),
21   (10, 'F6', TRUE), (10, 'G7', TRUE), (10, 'H8', TRUE), (10, 'I9', FALSE), (10, 'J10', TRUE),
22   (11, 'A1', TRUE), (11, 'B2', TRUE), (11, 'C3', TRUE), (11, 'D4', TRUE), (11, 'E5', TRUE),
23   (11, 'F6', TRUE), (11, 'G7', TRUE), (11, 'H8', TRUE), (11, 'I9', TRUE), (11, 'J10', TRUE),
24   (12, 'A1', TRUE), (12, 'B2', TRUE), (12, 'C3', TRUE), (12, 'D4', TRUE), (12, 'E5', TRUE),
```

Limit to 1000 rows

```sql
1 • SELECT * FROM SEATS;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

FlightID	SeatNumber	IsAvailable
1	A1	1
1	B2	0
1	C3	1
1	D4	1
1	E5	1
1	F6	1
1	G7	1
1	H8	1
1	I9	0
1	J10	1
2	A1	1
2	B2	0
2	C3	1
2	D4	1
2	E5	1
2	F6	1
2	G7	1
2	H8	0
2	I9	0
2	J10	1

```sql
1 • SELECT * FROM SEATS
2    WHERE isavailable = 0;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

FlightID	SeatNumber	IsAvailable
1	B2	0
1	I9	0
2	B2	0
2	H8	0
2	I9	0
3	F6	0
4	B2	0
4	E5	0
4	I9	0
5	H8	0
6	A1	0
6	G7	0
6	I9	0
6	J10	0
7	I9	0
12	G7	0
12	H8	0
12	I9	0
13	F6	0
13	G7	0

```sql
1    INSERT INTO Booking (BookingID, CustomerID, FlightID, SeatNumber, BookingDate) VALUES
2    (1, 4, 1, 'B2', '2025-05-01 08:30:00'),
3    (2, 17, 1, 'I9', '2025-05-01 10:15:00'),
4    (3, 9, 2, 'B2', '2025-05-01 12:30:00'),
5    (4, 3, 2, 'H8', '2025-05-02 06:45:00'),
6    (5, 12, 2, 'I9', '2025-05-02 09:00:00'),
7    (6, 19, 3, 'F6', '2025-05-02 11:00:00'),
8    (7, 5, 4, 'B2', '2025-05-03 07:30:00'),
9    (8, 13, 4, 'E5', '2025-05-03 09:15:00'),
10   (9, 8, 4, 'I9', '2025-05-03 12:00:00'),
11   (10, 14, 5, 'H8', '2025-05-03 14:15:00'),
12   (11, 6, 6, 'A1', '2025-05-04 06:30:00'),
13   (12, 1, 6, 'G7', '2025-05-04 08:00:00'),
14   (13, 16, 6, 'I9', '2025-05-04 09:45:00'),
15   (14, 18, 6, 'J10', '2025-05-04 11:00:00'),
16   (15, 11, 7, 'I9', '2025-05-04 13:30:00'),
17   (16, 2, 12, 'G7', '2025-05-05 06:45:00'),
18   (17, 10, 12, 'H8', '2025-05-05 08:15:00'),
19   (18, 20, 12, 'I9', '2025-05-05 10:30:00'),
20   (19, 15, 13, 'F6', '2025-05-05 12:45:00'),
21   (20, 7, 13, 'G7', '2025-05-06 07:30:00'),
22   (21, 4, 13, 'J10', '2025-05-06 09:00:00'),
23   (22, 13, 14, 'D4', '2025-05-06 10:15:00'),
24   (23, 19, 14, 'G7', '2025-05-06 11:30:00'),
```

```sql
1 ●  SELECT * FROM flight_booking_management_system.booking;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

BookingID	CustomerID	FlightID	SeatNumber	BookingDate
1	4	1	B2	2025-05-01 08:30:00
2	17	1	I9	2025-05-01 10:15:00
3	9	2	B2	2025-05-01 12:30:00
4	3	2	H8	2025-05-02 06:45:00
5	12	2	I9	2025-05-02 09:00:00
6	19	3	F6	2025-05-02 11:00:00
7	5	4	B2	2025-05-03 07:30:00
8	13	4	E5	2025-05-03 09:15:00
9	8	4	I9	2025-05-03 12:00:00
10	14	5	H8	2025-05-03 14:15:00
11	6	6	A1	2025-05-04 06:30:00
12	1	6	G7	2025-05-04 08:00:00
13	16	6	I9	2025-05-04 09:45:00
14	18	6	J10	2025-05-04 11:00:00
15	11	7	I9	2025-05-04 13:30:00
16	2	12	G7	2025-05-05 06:45:00
17	10	12	H8	2025-05-05 08:15:00
18	20	12	I9	2025-05-05 10:30:00
19	15	13	F6	2025-05-05 12:45:00
20	7	13	G7	2025-05-06 07:30:00

```sql
1    INSERT INTO Payment (PaymentID, BookingID, Amount, PaymentDate) VALUES
2    (1, 1, 150.00, '2025-05-01 08:45:00'),
3    (2, 2, 200.00, '2025-05-01 10:30:00'),
4    (3, 3, NULL, NULL),
5    (4, 4, 220.00, '2025-05-02 07:00:00'),
6    (5, 5, NULL, NULL),
7    (6, 6, 230.00, '2025-05-02 11:30:00'),
8    (7, 7, 210.00, '2025-05-03 08:00:00'),
9    (8, 8, NULL, NULL),
10   (9, 9, 240.00, '2025-05-03 12:00:00'),
11   (10, 10, 260.00, '2025-05-03 14:30:00'),
12   (11, 11, 175.00, '2025-05-04 07:30:00'),
13   (12, 12, 210.00, '2025-05-04 09:00:00'),
14   (13, 13, NULL, NULL),
15   (14, 14, 200.00, '2025-05-04 12:00:00'),
16   (15, 15, 190.00, '2025-05-04 13:30:00'),
17   (16, 16, 180.00, '2025-05-05 06:30:00'),
18   (17, 17, 240.00, '2025-05-05 08:00:00'),
19   (18, 18, 250.00, '2025-05-05 09:30:00'),
20   (19, 19, NULL, NULL),
21   (20, 20, 215.00, '2025-05-06 07:00:00'),
22   (21, 21, 225.00, '2025-05-06 08:30:00'),
23   (22, 22, NULL, NULL),
24   (23, 23, 245.00, '2025-05-06 11:30:00'),
```

```sql
1 •   SELECT * FROM flight_booking_management_system.payment;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: |

PaymentID	BookingID	Amount	PaymentDate
1	1	150.00	2025-05-01 08:45:00
2	2	200.00	2025-05-01 10:30:00
3	3	NULL	NULL
4	4	220.00	2025-05-02 07:00:00
5	5	NULL	NULL
6	6	230.00	2025-05-02 11:30:00
7	7	210.00	2025-05-03 08:00:00
8	8	NULL	NULL
9	9	240.00	2025-05-03 12:00:00
10	10	260.00	2025-05-03 14:30:00
11	11	175.00	2025-05-04 07:30:00
12	12	210.00	2025-05-04 09:00:00
13	13	NULL	NULL
14	14	200.00	2025-05-04 12:00:00
15	15	190.00	2025-05-04 13:30:00
16	16	180.00	2025-05-05 06:30:00
17	17	240.00	2025-05-05 08:00:00
18	18	250.00	2025-05-05 09:30:00
19	19	NULL	NULL

SQL QUERIES

```
1    SELECT
2        c.FullName,
3        p.Amount,
4        (p.Amount + 5) AS ServiceFee,
5        (p.Amount * 1.1) AS TotalWithTax
6    FROM Customer c
7    JOIN Booking b
8    ON c.CustomerID = b.CustomerID
9    JOIN Payment p
10   ON b.BookingID = p.BookingID;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: A

FullName	Amount	ServiceFee	TotalWithTax
Jane Smith	180.00	185.00	198.000
Mike Johnson	220.00	225.00	242.000
Emily Davis	150.00	155.00	165.000
Emily Davis	225.00	230.00	247.500
Ali Brown	210.00	215.00	231.000
Linda White	175.00	180.00	192.500
David Taylor	215.00	220.00	236.500
Susan Moore	240.00	245.00	264.000
Susan Moore	215.00	220.00	236.500
James Harris	NULL	NULL	NULL
Maryam Martin	240.00	245.00	264.000
Robert Tho...	190.00	195.00	209.000
Patricia Garcia	NULL	NULL	NULL
Charles Mart	NULL	NULL	NULL

```
1 •  SELECT
2        FlightNumber,
3        DepartureTime,
4        ArrivalTime,
5        TIMESTAMPDIFF(HOUR, DepartureTime, ArrivalTime) AS DurationHours
6    FROM
7        Flight;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: A

FlightNumber	DepartureTime	ArrivalTime	DurationHours
AU1001	2025-05-15 06:20:00	2025-05-15 14:10:00	7
TK1002	2025-06-03 13:30:00	2025-06-03 16:00:00	2
SA1003	2025-05-20 22:10:00	2025-05-21 06:45:00	8
PL1004	2025-06-01 09:00:00	2025-06-01 14:25:00	5
AU1005	2025-06-10 18:00:00	2025-06-11 01:30:00	7
TK1006	2025-05-28 07:40:00	2025-05-28 10:00:00	2
SA1007	2025-05-30 11:00:00	2025-05-30 19:15:00	8
PL1008	2025-06-05 04:30:00	2025-06-05 09:55:00	5
AU1009	2025-06-02 15:50:00	2025-06-02 21:20:00	5
TK1010	2025-06-08 17:10:00	2025-06-09 00:05:00	6
SA1011	2025-05-25 08:15:00	2025-05-25 14:20:00	6
AU1012	2025-06-04 23:10:00	2025-06-05 05:35:00	6
TK1013	2025-06-06 10:00:00	2025-06-06 12:45:00	2
PL1014	2025-05-26 06:30:00	2025-05-26 07:20:00	0
SA1015	2025-06-09 20:30:00	2025-06-10 04:00:00	7

```sql
1   SELECT
2       c.FullName,
3       CONCAT('Contact: ', c.Phone, ' | Email: ', c.Email) AS ContactInfo,
4       a.Country AS ArrivalCountry
5   FROM Customer c
6   JOIN Booking b ON c.CustomerID = b.CustomerID
7   JOIN Flight f ON b.FlightID = f.FlightID
8   JOIN Airport a ON f.ArrivalAirportID = a.AirportID
9   WHERE c.Email IS NOT NULL;
```

FullName	ContactInfo	ArrivalCountry
Jane Smith	Contact: 555-1342 | Email: jane.smith@gmail.com	Palestine
Mike Johnson	Contact: 555-2394 | Email: mike.johnson@gmail...	Turkey
Ali Brown	Contact: 555-4712 | Email: ali.brown@gmail.com	KSA
David Taylor	Contact: 555-7598 | Email: david.taylor@gmail....	Turkey
Susan Moore	Contact: 555-8510 | Email: susan.moore@gmail...	KSA
Susan Moore	Contact: 555-8510 | Email: susan.moore@gmail...	Palestine
Maryam Martin	Contact: 555-5921 | Email: maryam.martin@gm...	Palestine
Robert Thompson	Contact: 555-3467 | Email: robert.thompson@g...	Australia
Charles Martinez	Contact: 555-7198 | Email: charles.martinez@g...	KSA
Charles Martinez	Contact: 555-7198 | Email: charles.martinez@g...	Palestine
Barbara Robinson	Contact: 555-6245 | Email: barbara.robinson@...	KSA
Thomas Clark	Contact: 555-8709 | Email: thomas.clark@gmail...	Turkey
Christopher Lewis	Contact: 555-8246 | Email: christopher.lewis@g...	KSA
Christopher Lewis	Contact: 555-8246 | Email: christopher.lewis@g...	Australia
Sarah Hall	Contact: 555-5142 | Email: sarah.hall@gmail.com	Turkey

```sql
1   SELECT DISTINCT
2       a.Country AS ArrivalCountry
3   FROM Booking b
4   JOIN Flight f ON b.FlightID = f.FlightID
5   JOIN Airport a ON f.ArrivalAirportID = a.AirportID;
6
```

ArrivalCountry
Palestine
KSA
Australia
Turkey

```sql
1   SELECT f.FlightNumber, f.DepartureTime, f.ArrivalTime,
2       TIMESTAMPDIFF(HOUR, f.DepartureTime, f.ArrivalTime) AS FlightDuration
3   FROM Flight f
4   JOIN Airport a1 ON f.DepartureAirportID = a1.AirportID
5   JOIN Airport a2 ON f.ArrivalAirportID = a2.AirportID
6   WHERE
7       TIME(f.ArrivalTime) > '17:00:00'
8       AND TIMESTAMPDIFF(HOUR, f.DepartureTime, f.ArrivalTime) > 1;
```

FlightNumber	DepartureTime	ArrivalTime	FlightDuration
SA1007	2025-05-30 11:00:00	2025-05-30 19:15:00	8
AU1009	2025-06-02 15:50:00	2025-06-02 21:20:00	5

```sql
1    SELECT FullName, Phone, Email
2    FROM Customer
3    WHERE (Phone LIKE '%71%' OR Email LIKE '%n@%')
4        AND FullName LIKE '%A%';
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

FullName	Phone	Email
Ali Brown	555-4712	ali.brown@gmail.com
Maryam Martin	555-5921	maryam.martin@gmail.com
Charles Martinez	555-7198	charles.martinez@gmail.com
Barbara Robinson	555-6245	barbara.robinson@gmail.com

```sql
1    SELECT f.FlightNumber, f.DepartureTime, f.ArrivalTime,
2        TIMESTAMPDIFF(HOUR, f.DepartureTime, f.ArrivalTime) AS FlightDuration
3    FROM Flight f
4    JOIN Airport a1 ON f.DepartureAirportID = a1.AirportID
5    JOIN Airport a2 ON f.ArrivalAirportID = a2.AirportID
6    WHERE
7        TIME(f.ArrivalTime) > '17:00:00'
8        AND TIMESTAMPDIFF(HOUR, f.DepartureTime, f.ArrivalTime) > 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

FlightNumber	DepartureTime	ArrivalTime	FlightDuration
SA1007	2025-05-30 11:00:00	2025-05-30 19:15:00	8
AU1009	2025-06-02 15:50:00	2025-06-02 21:20:00	5

```sql
1    SELECT c.FullName, c.customerid, b.BookingID, p.Amount
2    FROM Customer c
3    JOIN Booking b ON c.CustomerID = b.CustomerID
4    JOIN Payment p ON b.BookingID = p.BookingID
5    WHERE c.CustomerID > 10
6        AND (p.Amount > 200 OR b.BookingID > 20)
7    ORDER BY p.Amount DESC;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

FullName	customerid	BookingID	Amount
Barbara Robinson	14	10	260.00
Nancy Hall	20	18	250.00
Daniel Walker	19	23	245.00
Daniel Walker	19	6	230.00
Christopher Lewis	17	25	225.00
Charles Martinez	13	22	NULL

```sql
1  SELECT c.CustomerID, c.FullName, b.BookingID, p.amount
2  FROM Customer c
3  JOIN Booking b ON c.CustomerID = b.CustomerID
4  LEFT JOIN Payment p ON b.BookingID = p.BookingID
5  ORDER BY customerid;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

CustomerID	FullName	BookingID	amount
1	John Doe	12	210.00
2	Jane Smith	16	180.00
3	Mike Johnson	4	220.00
4	Emily Davis	1	150.00
4	Emily Davis	21	225.00
5	Ali Brown	7	210.00
6	Linda White	11	175.00
7	David Taylor	20	215.00
8	Susan Moore	9	240.00
8	Susan Moore	24	215.00
9	James Harris	3	NULL
10	Maryam Martin	17	240.00
11	Robert Tho...	15	190.00
12	Patricia Garcia	5	NULL
13	Charles Mart...	8	NULL
13	Charles Mart...	22	NULL
14	Barbara Rob...	10	260.00
15	Thomas Clark	19	NULL
16	Jessica Rodr	13	NULL

```sql
2      c.CustomerID,
3      c.FullName,
4      COUNT(b.BookingID) AS TotalBookings,
5      MAX(b.BookingDate) AS LastBookingDate
6  FROM Customer c
7  LEFT JOIN Booking b ON c.CustomerID = b.CustomerID
8  GROUP BY c.CustomerID, c.FullName;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: |

CustomerID	FullName	TotalBookings	LastBookingDate
1	John Doe	1	2025-05-04 08:00:00
2	Jane Smith	1	2025-05-05 06:45:00
3	Mike Johnson	1	2025-05-02 06:45:00
4	Emily Davis	2	2025-05-06 09:00:00
5	Ali Brown	1	2025-05-03 07:30:00
6	Linda White	1	2025-05-04 06:30:00
7	David Taylor	1	2025-05-06 07:30:00
8	Susan Moore	2	2025-05-06 12:45:00
9	James Harris	1	2025-05-01 12:30:00
10	Maryam Martin	1	2025-05-05 08:15:00
11	Robert Thomp...	1	2025-05-04 13:30:00
12	Patricia Garcia	1	2025-05-02 09:00:00
13	Charles Martinez	2	2025-05-06 10:15:00
14	Barbara Robin...	1	2025-05-03 14:15:00
15	Thomas Clark	1	2025-05-05 12:45:00
16	Jessica Rodrig...	1	2025-05-04 09:45:00

```sql
1 ●  SELECT s.SeatNumber, c.CustomerID, c.FullName
2    FROM Seats s
3    JOIN Flight f ON s.FlightID = f.FlightID
4    JOIN Booking b ON s.FlightID = b.FlightID AND s.SeatNumber = b.SeatNumber
5    JOIN Customer c ON b.CustomerID = c.CustomerID
6    WHERE s.IsAvailable = FALSE;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

SeatNumber	CustomerID	FullName
B2	4	Emily Davis
I9	17	Christopher Lewis
B2	9	James Harris
H8	3	Mike Johnson
I9	12	Patricia Garcia
F6	19	Daniel Walker
B2	5	Ali Brown
E5	13	Charles Martinez
I9	8	Susan Moore
H8	14	Barbara Robinson
A1	6	Linda White
G7	1	John Doe
I9	16	Jessica Rodriguez
J10	18	Sarah Hall
I9	11	Robert Thompson
G7	2	Jane Smith
H8	10	Maryam Martin

```sql
1 ●  SELECT c.FullName,
2        SUBSTR(c.FullName, 1, 3) AS NameStart,
3        LENGTH(c.Email) AS EmailLength,
4        INSTR(c.Email, '@') AS AtSymbolPos
5    FROM Customer c
6    INNER JOIN Booking b ON c.CustomerID = b.CustomerID
7    INNER JOIN Flight f ON b.FlightID = f.FlightID
8    WHERE INSTR(c.Email, '@') > 0
9    ORDER BY c.CustomerID;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: IA

FullName	NameStart	EmailLength	AtSymbolPos
Jane Smith	Jan	20	11
Mike Johnson	Mik	22	13
Ali Brown	Ali	19	10
David Taylor	Dav	22	13
Susan Moore	Sus	21	12
Susan Moore	Sus	21	12
Maryam Martin	Mar	23	14
Robert Thompson	Rob	25	16
Charles Martinez	Cha	26	17
Charles Martinez	Cha	26	17
Barbara Robinson	Bar	26	17
Thomas Clark	Tho	22	13
Christopher Lewis	Chr	27	18
Christopher Lewis	Chr	27	18

```sql
1 •    SELECT f.FlightID, f.FlightNumber
2      FROM Flight f
3      JOIN Seats s ON f.FlightID = s.FlightID
4      GROUP BY f.FlightID
5      HAVING SUM(s.IsAvailable = TRUE) > 8;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

FlightID	FlightNumber
3	SA1003
5	AU1005
7	SA1007
8	PL1008
9	AU1009
10	TK1010
11	SA1011
15	SA1015

```sql
1 •    SELECT c.CustomerID, c.FullName
2      FROM Customer c
3      LEFT JOIN Booking b ON c.CustomerID = b.CustomerID
4      WHERE b.BookingID IS NULL;
5
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

CustomerID	FullName

```sql
1 •    SELECT c.FullName, f.FlightNumber, b.BookingID, p.PaymentID, p.Amount, p.PaymentDate
2      FROM Customer c
3      JOIN Booking b ON c.CustomerID = b.CustomerID
4      JOIN Flight f ON b.FlightID = f.FlightID
5      LEFT JOIN Payment p ON b.BookingID = p.BookingID
6      WHERE c.CustomerID = 5;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content:

FullName	FlightNumber	BookingID	PaymentID	Amount	PaymentDate
Ali Brown	PL1004	7	7	210.00	2025-05-03 08:00:00

```
1 ●    SELECT c.CustomerID, c.FullName, a.Country AS DestinationCountry
2      FROM Customer c
3      JOIN Booking b ON c.CustomerID = b.CustomerID
4      JOIN Flight f ON b.FlightID = f.FlightID
5      JOIN Airport a ON f.ArrivalAirportID = a.AirportID
6      GROUP BY c.CustomerID, a.Country
7      ORDER BY a.Country, c.CustomerID;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: A

CustomerID	FullName	DestinationCountry
11	Robert Thompson	Australia
17	Christopher Lewis	Australia
19	Daniel Walker	Australia
4	Emily Davis	KSA
5	Ali Brown	KSA
8	Susan Moore	KSA
13	Charles Martinez	KSA
14	Barbara Robinson	KSA
17	Christopher Lewis	KSA
2	Jane Smith	Palestine
8	Susan Moore	Palestine
10	Maryam Martin	Palestine
13	Charles Martinez	Palestine
19	Daniel Walker	Palestine
20	Nancy Hall	Palestine
1	John Doe	Turkey

```
1 ●    SELECT c.CustomerID, c.FullName, a.Country AS DestinationCountry
2      FROM Customer c
3      JOIN Booking b ON c.CustomerID = b.CustomerID
4      JOIN Flight f ON b.FlightID = f.FlightID
5      JOIN Airport a ON f.ArrivalAirportID = a.AirportID
6      GROUP BY c.CustomerID, a.Country
7      ORDER BY a.Country, c.CustomerID;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: A

CustomerID	FullName	DestinationCountry
2	Jane Smith	Palestine
8	Susan Moore	Palestine
10	Maryam Martin	Palestine
13	Charles Martinez	Palestine
19	Daniel Walker	Palestine
20	Nancy Hall	Palestine
1	John Doe	Turkey
3	Mike Johnson	Turkey
4	Emily Davis	Turkey
6	Linda White	Turkey
7	David Taylor	Turkey
9	James Harris	Turkey
12	Patricia Garcia	Turkey
15	Thomas Clark	Turkey
16	Jessica Rodriguez	Turkey
18	Sarah Hall	Turkey

```sql
1 •    SELECT f.flightID, f.FlightNumber, COUNT(s.SeatNumber) AS AvailableSeats
2      FROM Flight f
3      JOIN Seats s ON f.FlightID = s.FlightID
4      WHERE s.IsAvailable = TRUE
5      GROUP BY f.FlightID;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 𝐈𝐀

FlightID	FlightNumber	AvailableSeats
1	AU1001	8
2	TK1002	7
3	SA1003	9
4	PL1004	7
5	AU1005	9
6	TK1006	6
7	SA1007	9
8	PL1008	10
9	AU1009	10
10	TK1010	10
11	SA1011	10
12	AU1012	7
13	TK1013	7
14	PL1014	7
15	SA1015	9

```sql
1 •     SELECT c.CustomerID, c.FullName,
2           COUNT(b.BookingID) AS TotalBookings,
3           (SELECT SUM(p.Amount)
4             FROM Payment p
5             JOIN Booking b2 ON p.BookingID = b2.BookingID
6             WHERE b2.CustomerID = c.CustomerID) AS TotalPayments
7      FROM Customer c
8      JOIN Booking b ON c.CustomerID = b.CustomerID
9      GROUP BY c.CustomerID
10     ORDER BY TotalBookings DESC
11     LIMIT 1;
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 𝐈𝐀 | Fetch rows:

CustomerID	FullName	TotalBookings	TotalPayments
4	Emily Davis	2	375.00