Neeraj Pandey

E-TRAVEL

 # Create Airport Table

```
create table Airport (
        airportID varchar(10) PRIMARY KEY,
        airpportName varchar(30),
        airportCity varchar(30)
 )
```

 # Create Booking table

```
create table FlightBooking (
        ticketNo VARCHAR(20) PRIMARY KEY,
        passengerName VARCHAR(30),
        flightNumber VARCHAR(20),
        nationality VARCHAR(30),
        seatNumber VARCHAR(10),
        ticketPrice FLOAT(20),
        passengerAge INTEGER,
        foreign key (flightNumber) references Flight,
        foreign key (seatNumber, flightNumber) references SeatDetails
)
```

 # Create FlightDetails table

```
create table Flight (
        flightNumber varchar(20) PRIMARY KEY,
        departureAirport varchar(10),
        arrivalAirport varchar(10),
        flightCarrier varchar(20),
        foreign key (departureAirport) references Airport(airportId),
        foreign key (arrivalAirport) references Airport(airportId)
)
```

 # Create SeatDetails table

```
create table SeatDetails (
        seatNumber varchar(10),
        seatClass VARCHAR(20),
        flightNumber varchar(10),
        primary key (seatNumber, flightNumber),
        foreign key (flightNumber) references Flight
)
```

 # INSERTING THE VALUES INTO AIRPORT TABLE

```
INSERT into Airport
VALUES ('DEL', 'Indira Gandhi International Airport', 'New Delhi')

INSERT into Airport
VALUES ('SFO', 'San Francisco International Airport', 'San Francisco')

INSERT into Airport
VALUES ('CDG', 'Aéroport de Paris-Charles de Gaulle', 'Roissy-en-France')

INSERT into Airport
VALUES ('FRA', 'Frankfurt Airport', 'Frankfurt')

INSERT into Airport
VALUES ('HND', 'Haneda Airport', ‘Tokyo’)
```

 # INSERTING THE VALUES INTO FLIGHT DETAILS TABLE

INSERT into Flight
VALUES ("AI1616", "DEL", "SFO", "American Airlines")

INSERT into Flight
VALUES ("AI1414", "SFO", "CDG", "American Airlines")

INSERT into Flight
VALUES ("DA2121", "FRA", "DEL", "Delta Airlines")

INSERT into Flight
VALUES ("AF2121", "CDG", "DEL", "Air France")

INSERT into Flight
VALUES ("AF1254", "CDG", "HND", "Air France")

INSERT into Flight
VALUES ("SA6161", "HND", "DEL", "Singapore Airlines")

INSERT into Flight
VALUES ("SA4241", "HND", "SFO", "Singapore Airlines")

 # INSERTING THE VALUES INTO BOOKING DETAILS TABLE

INSERT INTO FlightBooking
VALUES ("KK121232", "Neeraj Pandey", "AI1616", "Indian", "K42", 1910, 28)

INSERT INTO FlightBooking
VALUES ("KK188232", "Tanuj Sood", "AI1414", "Indian", "A32", 1001, 55)

INSERT INTO FlightBooking
VALUES ("LK188272", "Manoj Pandey", "DA2121", "German", "B5", 699, 35)

INSERT INTO FlightBooking
VALUES ("CK188272", "James Powell", "AF2121", "German", "B9", 990, 42)

INSERT INTO FlightBooking
VALUES ("KK181172", "Harris", "AF1254", "French", "K12", 1000, 76)

INSERT INTO FlightBooking
VALUES ("SA180971", "Peter Kruce", "SA6161", "American", "B8", 2010, 18)

INSERT INTO FlightBooking
VALUES ("PK187671", "Anjana Vakil", "SA4241", "American", "E8", 670, 29)

 # INSERTING THE VALUES INTO BOOKING DETAILS TABLE

insert into SeatDetails
VALUES ("K42", "Economy", “AI1616")

insert into SeatDetails

VALUES ("A32", "Economy", “AI1414")

insert into SeatDetails
VALUES ("B5", "Business", “DA2121")

insert into SeatDetails
VALUES ("B9", "Business", “AF2121")

insert into SeatDetails
VALUES ("K12", "Economy", “AF1254")

insert into SeatDetails
VALUES ("B8", "Business", “SA6161")

insert into SeatDetails
VALUES ("E8", "Economy", "SA4241")

5 Meaningful Questions and Queries and Relational Algebra

1) Identify the name, flight number of passengers whose age is more than 40.

Relational: **π passengerName, flightNumber (σ passengerAge > 40(FlightBooking))**

SQL:
SELECT passengerName, flightNumber
FROM FlightBooking
WHERE passengerAge > 40;

2) Identify passenger name whose ticket price is more than 1000 dollars.

Relational: **π passengerName (σ ticketPrice > 1000(FlightBooking))**

SQL:
SELECT passengerName
FROM FlightBooking
WHERE ticketPrice > 1000;

3) Identify the passenger names who have booked a economy class seat.

Relational: **π passengerName (σ seatClass = “Economy” (FlightBooking ◁▷ SeatDetails))**

SQL:
SELECT FlightBooking.passengerName
FROM FlightBooking
INNER JOIN SeatDetails ON FlightBooking.seatNumber = SeatDetails.seatNumber
WHERE SeatDetails.seatClass = "Economy"

4) Identify the passenger name, flight carrier names of the passengers who opted for American Airlines.

Relational: **π passengerName, flightCarrier (σ flightCarrier = “American Airlines” (FlightBooking ◁▷ Flight))**

SQL:

```
SELECT FlightBooking.passengerName, Flight.flightCarrier
FROM FlightBooking
INNER JOIN Flight ON FlightBooking.flightNumber = Flight.flightNumber
WHERE Flight.flightCarrier = "American Airlines"
```

5) Identify the passenger names who are travelling from CDG (Roissy-en-France).

Relational: **π passengerName (σ departureAirport = “CDG” (FlightBooking ◁▷ Flight))**

SQL:

```
SELECT FlightBooking.passengerName
FROM FlightBooking
INNER JOIN Flight ON FlightBooking.flightNumber = Flight.flightNumber
WHERE Flight.departureAirport = "CDG"
```