Practical - 6

By	Aiman Siddiqua
Roll No.	2K18/MC/008

- **List full details of all flights in ascending order of RouteNo within descending order of Deptime.**

```
mysql> SELECT *
    -> FROM Flight
    -> ORDER BY DepTime DESC, RouteNo ASC;
+----------+-------------+-----------+----------+----------+--------------+---------+
| FlightNo | FromAirport | ToAirport | DepTime  | ArrTime  | AircraftType | RouteNo |
+----------+-------------+-----------+----------+----------+--------------+---------+
| BD556    | Kolkata     | Goa       | 20:10:00 | 22:40:00 | BF6          |       4 |
| BD412    | Pune        | Delhi     | 17:00:00 | 20:30:00 | BF6          |       6 |
| BD80     | Delhi       | Mumbai    | 15:20:00 | 19:15:00 | WM2          |       3 |
| BD54     | Indore      | Kolkata   | 14:00:00 | 17:20:00 | DC9          |       8 |
| BD332    | Delhi       | Mumbai    | 13:30:00 | 18:00:00 | DC9          |       3 |
| BD125    | Kolkata     | Goa       | 10:00:00 | 13:50:00 | 737          |       4 |
| BD582    | Mumbai      | Goa       | 09:00:00 | 11:10:00 | HS8          |       7 |
+----------+-------------+-----------+----------+----------+--------------+---------+
7 rows in set (0.09 sec)
```

- **Count the number of flights on the Itineraries of TicketNo's TN600 to TN700 inclusive.**

```
mysql> SELECT TicketNo, COUNT(FlightNo) AS FlightCount
    -> FROM Itinerary
    -> WHERE TicketNo BETWEEN 'TN600' AND 'TN700'
    -> GROUP BY TicketNo;
+----------+-------------+
| TicketNo | FlightCount |
+----------+-------------+
| TN607    |           2 |
| TN623    |           1 |
| TN668    |           1 |
| TN678    |           1 |
+----------+-------------+
4 rows in set (0.04 sec)
```

- **List TicketNo's with itineraries of 2 or more flights**

```
mysql> SELECT TicketNo
    -> FROM Itinerary
    -> GROUP BY TicketNo
    -> HAVING COUNT(FlightNo)>=2;
+----------+
| TicketNo |
+----------+
| TN607    |
| TN719    |
+----------+
2 rows in set (0.00 sec)
```

- **List Routes (RouteNo) with less than 4 timetabled flights.**

```
mysql> SELECT RouteNo
    -> FROM Flight
    -> GROUP BY RouteNo
    -> HAVING COUNT(FlightNo)<4;
+---------+
| RouteNo |
+---------+
|       3 |
|       4 |
|       6 |
|       7 |
|       8 |
+---------+
5 rows in set (0.00 sec)
```

- **List the most popular FareType based on currently recorded Itineraries. Your query should list each FareType and its number of occurrences.**

```
mysql> SELECT FareType, COUNT(FareType) AS NoOfOccurence
    -> FROM Itinerary
    -> GROUP BY FareType;
+----------+---------------+
| FareType | NoOfOccurence |
+----------+---------------+
| APX      |             2 |
| BUR      |             3 |
| SBS      |             3 |
| SDR      |             2 |
| SDS      |             2 |
+----------+---------------+
5 rows in set (0.00 sec)
```

- **Find the seating capacity of the aircraft allocated to flight BD80.**

```
mysql> SELECT NoOfSeats
    -> FROM Flight F, Aircraft A
    -> WHERE FlightNo = 'BD80' AND F.AircraftType = A.AircraftType;
+-----------+
| NoOfSeats |
+-----------+
|       175 |
+-----------+
1 row in set (0.17 sec)
```

- **List the description and seating capacity of the aircraft allocated to the flights on TicketNo TN607.**

```
mysql> SELECT ADescription, NoOfSeats
    -> FROM Aircraft A, Itinerary I, Flight F
    -> WHERE TicketNo = 'TN607' AND I.FlightNo = F.FlightNo AND F.AircraftType = A.AircraftType;
+-----------------+-----------+
| ADescription    | NoOfSeats |
+-----------------+-----------+
| Airbus A330-200 |       105 |
| Boeing 747SP    |       250 |
+-----------------+-----------+
2 rows in set (0.01 sec)
```

- **A passenger requests details of alternative flights departing earlier than his/her currently booked Flight (for Eg. BD80 15:20:00 Delhi->Mumbai).**

```
mysql> SELECT E.FlightNo, E.FromAirport, E.ToAirport, E.DepTime
    -> FROM Flight F, Flight E
    -> WHERE F.FlightNo = 'BD80'
    -> AND F.FromAirport = E.FromAirport
    -> AND F.ToAirport = E.ToAirport
    -> AND F.DepTime > E.DepTime;
+----------+-------------+-----------+----------+
| FlightNo | FromAirport | ToAirport | DepTime  |
+----------+-------------+-----------+----------+
| BD332    | Delhi       | Mumbai    | 13:30:00 |
+----------+-------------+-----------+----------+
1 row in set (0.00 sec)
```

- **To fly from Delhi to Goa passengers must undertake their journey in two stages. List the FlightNo's, Airport's, Departure and Arrival times for inter-connecting flights from Delhi to Goa.**

```
mysql> SELECT DISTINCT B.FlightNo, B.FromAirport, B.ToAirport, B.DepTime, B.ArrTime
    -> FROM Flight A, Flight B
    -> WHERE A.FromAirport = 'Delhi'
    -> AND A.ToAirport = B.FromAirport
    -> AND B.ToAirport = 'Goa';
+----------+-------------+-----------+----------+----------+
| FlightNo | FromAirport | ToAirport | DepTime  | ArrTime  |
+----------+-------------+-----------+----------+----------+
| BD582    | Mumbai      | Goa       | 09:00:00 | 11:10:00 |
+----------+-------------+-----------+----------+----------+
1 row in set (0.00 sec)
```

- **List the full name of the airport from which flight BD80 departs.**

```
mysql> SELECT aname
    -> FROM Airport A, Flight F
    -> WHERE FlightNo = 'BD80'
    -> AND F.FromAirport = A.airport;
+-----------------------------------+
| aname                             |
+-----------------------------------+
| Indira Gandhi International Airport |
+-----------------------------------+
1 row in set (0.00 sec)
```

- **List the full description and seating capacity of the aircraft allocated to flight BD80.**

```
mysql> SELECT ADescription, NoOfSeats
    -> FROM Aircraft A, Flight F
    -> WHERE FlightNo = 'BD80'
    -> AND F.AircraftType = A.AircraftType;
+----------------+-----------+
| ADescription   | NoOfSeats |
+----------------+-----------+
| Douglas DC-9-50 |       175 |
+----------------+-----------+
1 row in set (0.00 sec)
```

- **List the description and seating capacity of all the aircraft allocated to flights on the Itineraries of Tickets issue to 'Aiman Siddiqua'.**

```
mysql> SELECT ADescription, NoOfSeats
    -> FROM Aircraft A, Passenger P, Flight F, Ticket T, Itinerary I
    -> WHERE Name = 'Aiman Siddiqua'
```

```
    -> AND P.Pid = T.Pid
    -> AND T.TicketNo = I.TicketNo
    -> AND I.FlightNo = F.FlightNo
    -> AND F.AircraftType = A.AircraftType;
+--------------------+-----------+
| ADescription       | NoOfSeats |
+--------------------+-----------+
| Advanced Turbo Prop |       43 |
+--------------------+-----------+
1 row in set (0.00 sec)
```

- **List the FareTypes and Descriptions of the Fares available on RouteNo 4.**

```
mysql> SELECT F.FareType, F.FDescription
    -> FROM Tariff T, Fares F
    -> WHERE RouteNo = 4
    -> AND T.FareType = F.FareType;
+----------+--------------------+
| FareType | FDescription       |
+----------+--------------------+
| SBS      | Standby Single     |
| SDR      | Standard Day Return |
+----------+--------------------+
2 rows in set (0.00 sec)
```

- **Calculate the total ticket price for Ticket number TN607 using Price from the Tariff table.**

```
mysql> SELECT SUM(price) AS TotalPrice
    -> FROM Itinerary I, Flight F, Tariff T
    -> WHERE TicketNo = 'TN607'
    -> AND I.FlightNo = F.FlightNo
    -> AND F.RouteNo = T.RouteNo
    -> AND I.FareType = T.FareType;
+------------+
| TotalPrice |
+------------+
|        170 |
+------------+
1 row in set (0.00 sec)
```

- **List the full name of the airport from which flight BD80 departs and the full name of the airport at which flight BD80 arrives. Hint: each flight record refers to two Airport records therefore the Airport table should appear twice in the FROM clause. Use aliases to differentiate the first Airport reference from the second.**

```
mysql> SELECT A.aname, B.aname
    -> FROM Airport A, Airport B, Flight F
    -> WHERE FlightNo = 'BD80'
    -> AND F.FromAirport = A.airport
    -> AND F.ToAirport = B.airport;
+------------------------------------+-------------------------------------------------+
| aname                              | aname                                           |
+------------------------------------+-------------------------------------------------+
| Indira Gandhi International Airport | Chhatrapati Shivaji Maharaj International Airport |
+------------------------------------+-------------------------------------------------+
1 row in set (0.00 sec)
```