**PRACTICAL – 9**

Aiman Siddiqua 2K18/MC/008

**AIM:**

To write some more Nested Queries and complex subqueries.

**QUERIES:**

* **Find names of the airports from which direct flights may be taken to the destinations - Mumbai and Pune.**

mysql> **SELECT** A.AName

-> **FROM** Airport A, Flight F

-> **WHERE** A.Airport = F.FromAirport

-> **AND** F.ToAirport **IN** ('Mumbai', 'Pune')

-> **GROUP** **BY** F.FromAirport

-> **HAVING** **COUNT**(**DISTINCT** F.ToAirport) = **2**;

+-------------------------------------+

| AName |

+-------------------------------------+

| Indira Gandhi International Airport |

+-------------------------------------+

**1** row **in** **set** (**0**.**20** sec)

* **Find the Names and Addresses of passengers flying from Indore to Kolkata and from Kolkata to Indore. Not necessarily on the same ticket.**

mysql> **SELECT** Name, Address

-> **FROM** Passenger P, Ticket T, Itinerary I, Flight F

-> **WHERE** P.Pid = T.Pid **AND**

-> T.TicketNo = I.TicketNo **AND**

-> I.FlightNo = F.FlightNo **AND**

-> F.FromAirport = 'Indore' **AND**

-> F.ToAirport = 'Kolkata'

-> **AND** P.Pid **IN** (

-> **SELECT** P.Pid

-> **FROM** Passenger P, Ticket T, Itinerary I, Flight F

-> **WHERE** P.Pid = T.Pid **AND**

-> T.TicketNo = I.TicketNo **AND**

-> I.FlightNo = F.FlightNo **AND**

-> F.FromAirport = 'Kolkata' **AND**

-> F.ToAirport = 'Indore' );

+----------------+--------------+

| Name | Address |

+----------------+--------------+

| Aiman Siddiqua | Kidwai Nagar |

+----------------+--------------+

**1** row **in** **set** (**0**.**00** sec)

* **Find the Names and Addresses of passengers flying from Indore to Kolkata and from Kolkata to Indore or both.**

mysql> **SELECT** **DISTINCT** Name, Address

-> **FROM** Passenger P, Ticket T, Itinerary I, Flight F

-> **WHERE** P.Pid = T.Pid **AND**

-> T.TicketNo = I.TicketNo **AND**

-> I.FlightNo = F.FlightNo **AND**

-> ((F.FromAirport = 'Indore' **AND**

-> F.ToAirport = 'Kolkata') **OR**

-> (F.FromAirport = 'Kolkata' **AND**

-> F.ToAirport = 'Indore'));

+----------------+--------------+

| Name | Address |

+----------------+--------------+

| Aiman Siddiqua | Kidwai Nagar |

| Aksht Jain | Gohana |

+----------------+--------------+

**2** rows **in** **set** (**0**.**00** sec)

* **List the names and addresses of any passenger on a single ticket with more than 1 flight.**

mysql> **SELECT** Name, Address

-> **FROM** Passenger P, Ticket T, Itinerary I

-> **WHERE** P.Pid = T.Pid **AND**

-> T.TicketNo = I.TicketNo

-> **GROUP** **BY** I.TicketNo

-> **HAVING** **COUNT**(I.FlightNo) > **1**;

+------------------+--------------+

| Name | Address |

+------------------+--------------+

| Aiman Siddiqua | Kidwai Nagar |

| Samriddhi Banara | Dwarka |

| Aksht Jain | Gohana |

+------------------+--------------+

**3** rows **in** **set** (**0**.**00** sec)

* **Find the names of those passengers who are taking all of the flights that Ritwik Arora is taking.**

mysql> **SELECT** P.Name

-> **FROM** Passenger P, Itinerary I, Ticket T

-> **WHERE** P.Pid = T.Pid

-> **AND** T.TicketNo = I.TicketNo

->

-> **AND** P.Name <> 'Ritwik Arora'

-> **AND** FlightNo **IN** ( **SELECT** I2.FlightNo **FROM** passenger P2, Itinerary I2, Ticket T2

-> **WHERE** P2.Pid = T2.Pid

-> **AND** T2.TicketNo = I2.TicketNo

-> **AND** P2.Name = 'Ritwik Arora')

-> **GROUP** **BY** P.Pid

-> **HAVING** **COUNT**(**DISTINCT** I.FlightNo) = (**SELECT** **COUNT**(**DISTINCT** I2.FlightNo) **FROM** passenger P2, Itinerary I2, Ticket T2

-> **WHERE** P2.Pid = T2.Pid

-> **AND** T2.TicketNo = I2.TicketNo

-> **AND** P2.Name = 'Ritwik Arora');

+-------------------+

| Name |

+-------------------+

| Apoorva Srivastav |

+-------------------+

**1** row **in** **set** (**0**.**00** sec)

* **Rewrite the SQL statement given for query above so that it compares flights for the same ticket and find those passengers with return tickets Indore to Kolkata and back. Note: you will need to use correlated sub-queries and an alternative query strategy to find the intersection.**

mysql> **SELECT** Name, Address

-> **FROM** Passenger P, Ticket T, Itinerary I, Flight F

-> **WHERE** P.Pid = T.Pid **AND**

-> T.TicketNo = I.TicketNo **AND**

-> I.FlightNo = F.FlightNo **AND**

-> F.FromAirport = 'Indore' **AND**

-> F.ToAirport = 'Kolkata'

-> **AND** P.Pid **IN** (

-> **SELECT** P.Pid

-> **FROM** Passenger P, Ticket T2, Itinerary I, Flight F

-> **WHERE** P.Pid = T2.Pid **AND**

-> T2.TicketNo = I.TicketNo **AND**

-> T2.TicketNo = T.TicketNo **AND**

-> I.FlightNo = F.FlightNo **AND**

-> F.FromAirport = 'Kolkata' **AND**

-> F.ToAirport = 'Indore' );

+----------------+--------------+

| Name | Address |

+----------------+--------------+

| Aiman Siddiqua | Kidwai Nagar |

+----------------+--------------+

**1** row **in** **set** (**0**.**01** sec)

* **Using correlated sub-queries find the Names of those passengers with a ticket to fly from Indore to Kolkata without a return flight to Indore; i.e., those passengers with non-return tickets.**

mysql> **SELECT** Name, Address

-> **FROM** Passenger P, Ticket T, Itinerary I, Flight F

-> **WHERE** P.Pid = T.Pid **AND**

-> T.TicketNo = I.TicketNo **AND**

-> I.FlightNo = F.FlightNo **AND**

-> F.FromAirport = 'Indore' **AND**

-> F.ToAirport = 'Kolkata'

-> **AND** P.Pid **NOT** **IN** (

-> **SELECT** P.Pid

-> **FROM** Passenger P, Ticket T, Itinerary I, Flight F

-> **WHERE** P.Pid = T.Pid **AND**

-> T.TicketNo = I.TicketNo **AND**

-> I.FlightNo = F.FlightNo **AND**

-> F.FromAirport = 'Kolkata' **AND**

-> F.ToAirport = 'Indore' );

+------------+---------+

| Name | Address |

+------------+---------+

| Aksht Jain | Gohana |

+------------+---------+

**1** row **in** **set** (**0**.**11** sec)