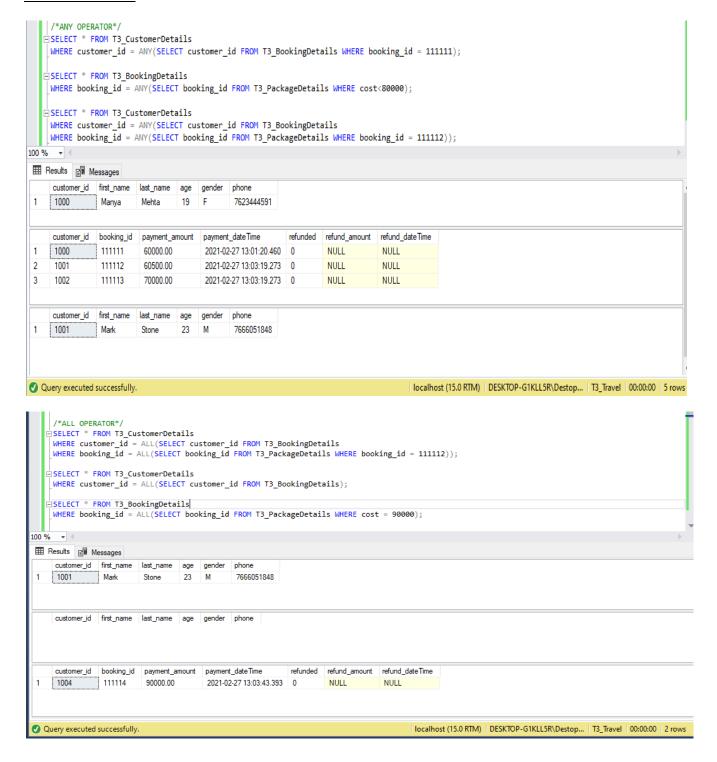
DBMS LAB ASSIGNMENT 5

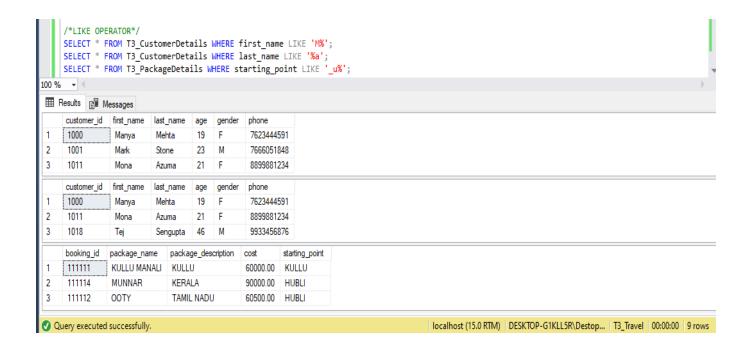
NAME: KASHA SINGH

REG. NO.: 19BCS051

```
1.Illustrate logical ANY, ALL and LIKE operator- the queries should be relevant to your
respective databases 3 queries for each operator. One query explaining the
difference between ANY and ALL
/*ANY OPERATOR*/
SELECT * FROM T3 CustomerDetails
WHERE customer_id = ANY(SELECT customer_id FROM T3_BookingDetails WHERE booking_id =
111111);
SELECT * FROM T3 BookingDetails
WHERE booking_id = ANY(SELECT booking_id FROM T3_PackageDetails WHERE cost<80000);</pre>
SELECT * FROM T3 CustomerDetails
WHERE customer id = ANY(SELECT customer id FROM T3 BookingDetails
WHERE booking_id = ANY(SELECT booking_id FROM T3_PackageDetails WHERE booking_id =
111112));
/*ALL OPERATOR*/
SELECT * FROM T3 CustomerDetails
WHERE customer_id = ALL(SELECT customer_id FROM T3_BookingDetails
WHERE booking_id = ALL(SELECT booking_id FROM T3_PackageDetails WHERE booking_id =
111112));
SELECT * FROM T3_CustomerDetails
WHERE customer_id = ALL(SELECT customer_id FROM T3_BookingDetails);
SELECT * FROM T3 BookingDetails
WHERE booking id = ALL(SELECT booking id FROM T3 PackageDetails WHERE cost = 90000);
/*LIKE OPERATOR*/
SELECT * FROM T3 CustomerDetails WHERE first name LIKE 'M%';
```

SELECT * FROM T3_CustomerDetails WHERE last_name LIKE '%a';
SELECT * FROM T3 PackageDetails WHERE starting point LIKE ' u%';

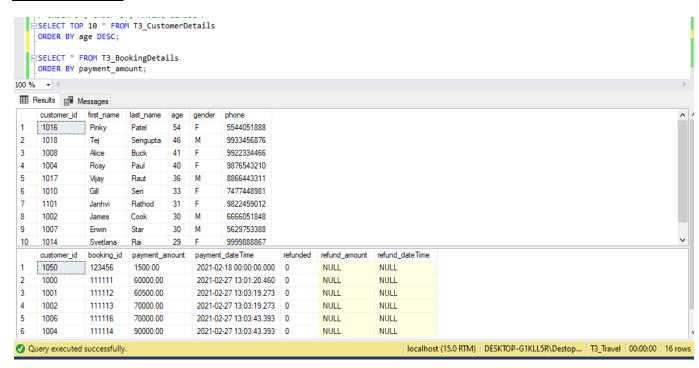


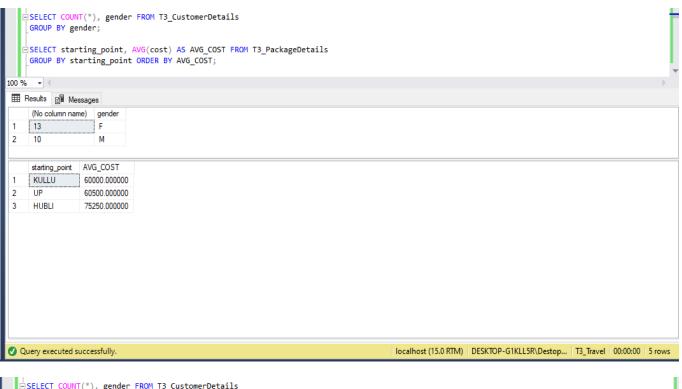


2. One query for each Aggregate function.
/*AGGREGATE FUNCTION*/
SELECT COUNT(first_name) FROM T3_CustomerDetails
WHERE gender = 'M';
SELECT AVG(age) FROM T3_CustomerDetails;
SELECT MAX(cost) FROM T3_PackageDetails;
SELECT MIN(payment_amount) FROM T3_BookingDetails;



```
3. Illustrate the usage of order by, group by and having clause (2 queries for each case)
/*ORDER BY, GROUP BY, HAVING CLAUSE*/
SELECT TOP 10 * FROM T3_CustomerDetails
ORDER BY age DESC;
SELECT * FROM T3 BookingDetails
ORDER BY payment amount;
SELECT COUNT(*), gender FROM T3 CustomerDetails
GROUP BY gender;
SELECT starting point, AVG(cost) AS AVG COST FROM T3 PackageDetails
GROUP BY starting point ORDER BY AVG COST;
SELECT COUNT(*), gender FROM T3_CustomerDetails
GROUP BY gender
HAVING COUNT(*)>10;
SELECT starting_point, AVG(cost) AS AVG_COST FROM T3_PackageDetails
GROUP BY starting_point
HAVING starting_point LIKE '_u%'
ORDER BY AVG_COST;
```







```
4. Use Aggregate function with group by and having
/*AGGREGATE FUNCTION WITH GROUP BY AND HAVING*/
SELECT COUNT(*), gender FROM T3_CustomerDetails
GROUP BY gender
HAVING COUNT(*)>10;

SELECT starting_point, AVG(cost) AS AVG_COST FROM T3_PackageDetails
GROUP BY starting_point
HAVING starting_point LIKE '_u%'
ORDER BY AVG_COST;
```



5. Write at least 3 nested queries using order by, group by and having clause.

```
SELECT * FROM T3_CustomerDetails
WHERE customer_id IN (SELECT customer_id FROM T3_BookingDetails)
ORDER BY age;

SELECT AVG(payment_amount) AS avg_cost, payment_dateTime FROM T3_BookingDetails
WHERE booking_id IN (SELECT booking_id FROM T3_PackageDetails)
GROUP BY payment_dateTime;

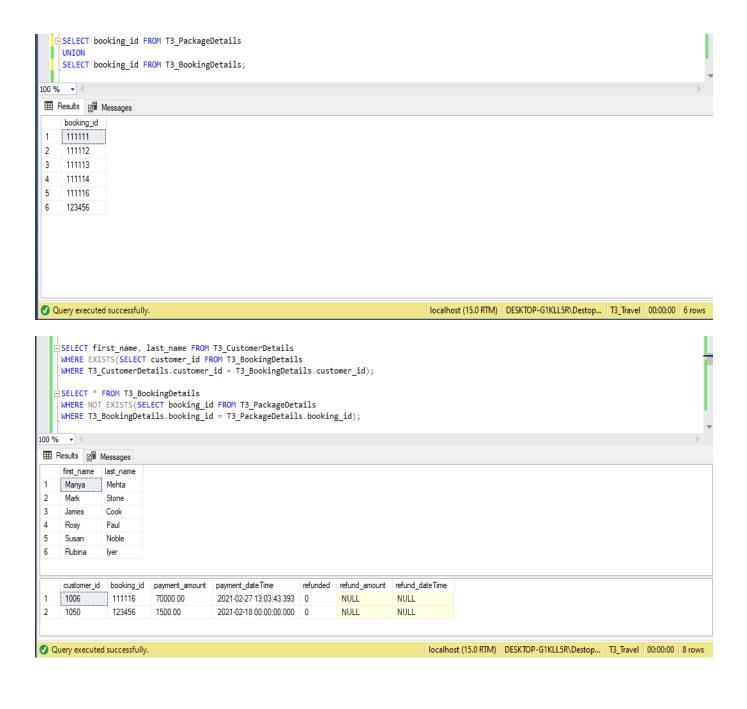
SELECT age, COUNT(*) AS count FROM T3_CustomerDetails
WHERE customer_id IN (SELECT customer_id FROM T3_BookingDetails)
GROUP BY age HAVING age<30
ORDER BY age DESC;</pre>
```



```
6. Illustrate the Usage of Except, Exists, Not Exists, Union, Intersection
SELECT customer id FROM T3 CustomerDetails
EXCEPT
SELECT customer_id FROM T3_BookingDetails;
SELECT customer_id FROM T3_CustomerDetails
SELECT customer id FROM T3 BookingDetails;
SELECT booking_id FROM T3_PackageDetails
UNION
SELECT booking_id FROM T3_BookingDetails;
SELECT first_name, last_name FROM T3_CustomerDetails
WHERE EXISTS(SELECT customer_id FROM T3_BookingDetails
WHERE T3_CustomerDetails.customer_id = T3_BookingDetails.customer_id);
SELECT * FROM T3 BookingDetails
WHERE NOT EXISTS(SELECT booking_id FROM T3_PackageDetails
WHERE T3_BookingDetails.booking_id = T3_PackageDetails.booking_id);
DATABASE OUTPUT:
    SELECT customer_id FROM T3_CustomerDetails
     SELECT customer_id FROM T3_BookingDetails;
    SELECT customer_id FROM T3_CustomerDetails
     INTERSECT
     SELECT customer_id FROM T3_BookingDetails;
 100 % 🕶 🔻
  customer_id
    1007
     1010
     1011
     1012
     1013
     1014
     1015
     1016
  10
     1017
  11
     1018
  12
     1019
     1040
  14
     1101
  15
     1105
     1109
  16
    1111
 Query executed successfully
                                                                   localhost (15.0 RTM) | DESKTOP-G1KLL5R\Destop... | T3_Travel | 00:00:00 | 17 rows
     customer_id
     1000
     1001
     1002
     1004
  5
     1006
  6
     1050
```

Query executed successfully.

localhost (15.0 RTM) | DESKTOP-G1KLL5R\Destop... | T3_Travel | 00:00:00 | 6 rows



```
7. INNER JOIN, LEFT OUTER JOIN, RIGHT OUTER JOIN- 3 queries for each instance
/*INNER JOIN, LEFT OUTER JOIN, RIGHT OUTER JOIN*/
SELECT * FROM T3_CustomerDetails C
INNER JOIN T3_BookingDetails B
ON C.customer_id = B.customer_id;

SELECT customer_id, package_name, package_description FROM T3_PackageDetails P
INNER JOIN T3_BookingDetails B
ON P.booking_id = B.booking_id;

SELECT first_name, last_name, payment_amount, package_name FROM T3_CustomerDetails C
INNER JOIN T3_BookingDetails B ON C.customer_id = B.customer_id
```

```
INNER JOIN T3_PackageDetails P ON B.booking_id = P.booking_id;
SELECT TOP 10 * FROM T3 CustomerDetails C
LEFT OUTER JOIN T3_BookingDetails B
ON C.customer_id = B.customer_id;
SELECT customer id, package name, package description FROM T3 PackageDetails P
LEFT OUTER JOIN T3 BookingDetails B
ON P.booking id = B.booking id;
SELECT TOP 10 first name, last name, payment amount, package name FROM T3 CustomerDetails
LEFT OUTER JOIN T3 BookingDetails B ON C.customer id = B.customer id
LEFT OUTER JOIN T3 PackageDetails P ON B.booking id = P.booking id;
SELECT * FROM T3 CustomerDetails C
RIGHT OUTER JOIN T3 BookingDetails B
ON C.customer_id = B.customer_id;
SELECT customer_id, package_name, package_description FROM T3_PackageDetails P
RIGHT OUTER JOIN T3 BookingDetails B
ON P.booking_id = B.booking_id;
SELECT first_name, last_name, payment_amount, package_name FROM T3_CustomerDetails C
RIGHT OUTER JOIN T3_BookingDetails B ON C.customer_id = B.customer_id
RIGHT OUTER JOIN T3 PackageDetails P ON B.booking id = P.booking id;
DATABASE OUTPUT:
    SELECT * FROM T3 CustomerDetails C
    INNER JOIN T3_BookingDetails B
    ON C.customer_id = B.customer_id;
   SELECT customer id, package name, package description FROM T3 PackageDetails P
    INNER JOIN T3 BookingDetails B
    ON P.booking id = B.booking id;
   SELECT first_name, last_name, payment_amount, package_name FROM T3_CustomerDetails C
    INNER JOIN T3_BookingDetails B ON C.customer_id = B.customer_id
    INNER JOIN T3_PackageDetails P ON B.booking_id = P.booking_id;
100 % -
 Results Messages
     customer_id first_name last_name age gender phone
                                               customer_id booking_id payment_amount payment_dateTime
                                                                                           refunded refund amount refund date Time
                     Mehta 19 F
                                                        111111 60000.00
              Manya
                                      7623444591 1000
                                                                           2021-02-27 13:01:20.460 0
                                                                                                             NULL
                     Stone
                                                        111112
 2
     1001
              Mark
                           23 M
                                       7666051848 1001
                                                                60500.00
                                                                            2021-02-27 13:03:19.273 0
                                                                                                   NULL
                                                                                                             NULL
                   Cook 30 M
     1002
                                                                70000.00
                                                                                                   NULL
 3
              James
                                      6666051848 1002
                                                        111113
                                                                            2021-02-27 13:03:19.273 0
                                                                                                             NULL
 4
                            40 F
                                                                                                   NULL
     1004
              Rosy
                     Paul
                                       9876543210 1004
                                                        111114
                                                                90000.00
                                                                            2021-02-27 13:03:43.393 0
                                                                                                             NULL
                            21 F
 5
     1006
              Susan
                     Noble
                                       8887051648 1006
                                                        111116
                                                                70000.00
                                                                            2021-02-27 13:03:43.393 0
                                                                                                   NULL
                                                                                                             NULL
                          23 F
                                                        123456 1500.00
              Rubina
                                    7666054409 1050
                                                                            2021-02-18 00:00:00.000 0
                                                                                                   NULL
                                                                                                             NULL
     1050
 6
     customer_id package_name package_description
    1002
              HARIDWAR
                         SACRED PLACE
 2
     1000
              KULLU MANALI KULLU
              MUNNAR
                         KERALA
 3
     1004
                        TAMIL NADU
     1001
             OOTY
     first name
            last_name payment_amount package_name
    James
            Cook
                    70000 00
                                HARIDWAR
     Manya
             Mehta
                    60000.00
                                KULLU MANALI

    Query executed successfully.

                                                                        localhost (15.0 RTM) | DESKTOP-G1KLL5R\Destop... | T3_Travel | 00:00:00 | 14 rows
```

```
SELECT TOP 10 * FROM T3_CustomerDetails C
      LEFT OUTER JOIN T3_BookingDetails B
ON C.customer_id = B.customer_id;
     SELECT customer_id, package_name, package_description FROM T3_PackageDetails P
LEFT OUTER JOIN T3_BookingDetails B
ON P.booking_id = B.booking_id;
    □ SELECT TOP 10 first_name, last_name, payment_amount, package_name FROM T3_CustomerDetails C

LEFT OUTER JOIN T3_BookingDetails B ON C.customer_id = B.customer_id

LEFT OUTER JOIN T3_PackageDetails P ON B.booking_id = P.booking_id;
100 %
Results Messages
       customer_id
                    first name
                                 last name
                                             age
                                                   gender
                                                             phone
                                                                           customer id
                                                                                         booking_id
                                                                                                      payment amount
                                                                                                                        payment dateTime
                                                                                                                                                   refunded
                                                                                                                                                              refund amount
                                                                                                                                                                               refund dateTime
                                                              7623444591
                                                                                          111111
                                                                                                                         2021-02-27 13:01:20.460 0
      1000
                     Manya
                                 Mehta
                                              19
                                                                            1000
                                                                                                       60000.00
                                                                                                                                                              NULL
                                                                                                                                                                               NULL
                     Mark
                                 Stone
                                              23
                                                              7666051848
                                                                            1001
                                                                                          111112
                                                                                                       60500.00
                                                                                                                          2021-02-27 13:03:19.273
                                                                                                                                                              NULL
                                                                                                                                                                               NULL
        1001
        1002
                     James
                                 Cook
                                              30
                                                              6666051848
                                                                                          111113
                                                                                                       70000.00
                                                                                                                          2021-02-27 13:03:19.273
                                                                                                                                                              NULL
                                                                                                                                                                               NULL
       1004
                     Rosy
                                 Paul
                                              40
                                                              9876543210
                                                                                          111114
                                                                                                       90000.00
                                                                                                                          2021-02-27 13:03:43.393
                                                                                                                                                                               NULL
        1006
                                 Noble
                                              21
                                                              8887051648
                                                                            1006
                                                                                          111116
                                                                                                       70000.00
                                                                                                                         2021-02-27 13:03:43.393
                                                                                                                                                               NULL
                                                                                                                                                                               NULL
                     Susan
       1007
                     Erwin
                                 Star
                                              30
                                                    М
                                                              5629753388
                                                                           NULL
                                                                                          NULL
                                                                                                       NULL
                                                                                                                         NULL
                                                                                                                                                   NULL
                                                                                                                                                              NULL
                                                                                                                                                                               NULL
       1008
                     Alice
                                 Buck
                                              41
                                                              9922334466
                                                                           NULL
                                                                                          NULL
                                                                                                       NULL
                                                                                                                         NULL
                                                                                                                                                   NULL
                                                                                                                                                              NULL
                                                                                                                                                                               NULL
 8
       1010
                     Gill
                                 Sen
                                              33
                                                              7477448981
                                                                           NULL
                                                                                          NULL
                                                                                                       NULL
                                                                                                                         NULL
                                                                                                                                                   NULL
                                                                                                                                                              NULL
                                                                                                                                                                               NULL
 9
       1011
                     Mona
                                 Azuma
                                              21
                                                             8899881234
                                                                           NULL
                                                                                          NULL
                                                                                                       NULL
                                                                                                                         NULL
                                                                                                                                                   NULL
                                                                                                                                                              NULL
                                                                                                                                                                               NULL
 10
       1012
                     Hanna
                                 Khan
                                              24
                                                              6666115848
                                                                          NULL
                                                                                          NULL
                                                                                                       NULL
                                                                                                                         NULL
                                                                                                                                                   NULL
                                                                                                                                                              NULL
                                                                                                                                                                               NULL
        customer_id
                     package_name
      1002
                     HARIDWAR
                                       SACRED PLACE
 2
        1000
                     KULLU MANALI
                                       KULLU
       1004
                     MUNNAR
                                       KERALA
 4
       1001
                     OOTY
                                       TAMIL NADU

    Query executed successfully.

                                                                                                                   localhost (15.0 RTM) | DESKTOP-G1KLL5R\Destop... | T3_Travel | 00:00:00 | 24 rows
      first_name
                  last_name payment_amount package_name
      Manya
                   Mehta
                               60000 00
                                                 KULLU MANALI
2
                               60500.00
                                                 OOTY
       Mark
                   Stone
3
                               70000.00
                                                 HARIDWAR
       James
                   Cook
4
                   Paul
                               90000.00
                                                 MUNNAR
       Rosy
5
                               70000.00
                                                 NULL
       Susan
                   Noble
6
       Erwin
                   Star
                               NULL
                                                 NULL
       Alice
                   Buck
                               NULL
                                                 NULL
8
      Gill
                   Sen
                               NULL
                                                 NULL
      Mona
                              NULL
                                                 NULL
9
                   Azuma
10
      Hanna
                   Khan
                               NULL

    Query executed successfully.

                                                                                                                 localhost (15.0 RTM) | DESKTOP-G1KLL5R\Destop... | T3_Travel | 00:00:00 | 24 rows
     SELECT * FROM T3_CustomerDetails C
      RIGHT OUTER JOIN T3_BookingDetails B
      ON C.customer_id = B.customer_id;
     ☐SELECT customer_id, package_name, package_description FROM T3_PackageDetails P
RIGHT OUTER JOIN T3_BookingDetails B
      ON P.booking_id = B.booking_id;
     SELECT first_name, last_name, payment_amount, package_name FROM T3_CustomerDetails C
RIGHT OUTER JOIN T3_BookingDetails B ON C.customer_id = B.customer_id
RIGHT OUTER JOIN T3_PackageDetails P ON B.booking_id = P.booking_id;
100 %
Results Messages
       customer_id
                    first_name
                                                                                        booking_id
                                                                                                                        payment_dateTime
                                                                                                                                                                             refund_dateTime
                                                                                                     payment_amount
                                                                                                                                                            refund_amount
                                             age
                                                   gende
                    Manya
      1000
                                 Mehta
                                              19
                                                             7623444591
                                                                           1000
                                                                                         111111
                                                                                                      60000.00
                                                                                                                        2021-02-27 13:01:20.460
                                                                                                                                                 0
                                                                                                                                                             NULL
                                                                                                                                                                             NULL
       1001
                     Mark
                                 Stone
                                             23
                                                   М
                                                             7666051848
                                                                           1001
                                                                                         111112
                                                                                                      60500.00
                                                                                                                        2021-02-27 13:03:19.273
                                                                                                                                                 0
                                                                                                                                                             NULL
                                                                                                                                                                             NULL
       1002
                     James
                                 Cook
                                             30
                                                   M
                                                             6666051848
                                                                           1002
                                                                                         111113
                                                                                                      70000 00
                                                                                                                        2021-02-27 13:03:19 273
                                                                                                                                                             NULL
                                                                                                                                                                             NULL
       1004
                     Rosy
                                 Paul
                                             40
                                                             9876543210
                                                                           1004
                                                                                         111114
                                                                                                      90000 00
                                                                                                                        2021-02-27 13:03:43 393
                                                                                                                                                             NULL
                                                                                                                                                                             NULL
       1006
                     Susan
                                 Noble
                                             21
                                                             8887051648
                                                                           1006
                                                                                         111116
                                                                                                      70000.00
                                                                                                                        2021-02-27 13:03:43.393
                                                                                                                                                             NULL
                                                                                                                                                                             NULL
                                                             7666054409
                                                                           1050
                                                                                         123456
                                                                                                      1500.00
                                                                                                                        2021-02-18 00:00:00.000
                                                                                                                                                                             NULL
 6
       1050
                     Rubina
                                 lver
                                             23
                                                                                                                                                             NULL
       customer_id
                    package name
                                      package_description
      1000
                     KULLU MANALI
                                      KULLU
                                       TAMIL NADU
                     OOTY
       1001
```

localhost (15.0 RTM) | DESKTOP-G1KLL5R\Destop... | T3_Travel | 00:00:00 | 16 rows

1002

1004

1006

1050

Query executed successfully

HARIDWAR

MUNNAR

NULL NULL SACRED PLACE

KERALA NULL

NULL

```
last_name payment_amount package_name
                                            HARIDWAR
     James
                           70000.00
               Cook
2
      Manya
                 Mehta
                           60000.00
                                            KULLU MANALI
      Rosy
                           90000.00
                                            MUNNAR
3
                 Paul
                           60500.00
                                            OOTY
      Mark
                 Stone

    Query executed successfully.

                                                                                                     localhost (15.0 RTM) | DESKTOP-G1KLL5R\Destop... | T3_Travel | 00:00:00 | 16 rows
```

```
8. Use all the above condition in JOIN as well.
SELECT customer_id, package_name, package_description FROM T3_PackageDetails P
INNER JOIN T3_BookingDetails B
ON P.booking_id = B.booking_id AND P.cost>60000
ORDER BY 1;

SELECT COUNT(*), age FROM T3_CustomerDetails C
LEFT OUTER JOIN T3_BookingDetails B
ON C.customer_id = B.customer_id
GROUP BY age HAVING age<30;

SELECT first_name, last_name, payment_amount, package_name FROM T3_CustomerDetails C
RIGHT OUTER JOIN T3_BookingDetails B ON C.customer_id = B.customer_id
RIGHT OUTER JOIN T3_PackageDetails P ON B.booking_id = P.booking_id
ORDER BY payment_amount;</pre>
```

