DATABASE MANAGEMENT SYSTEM

Subject code : P11A3DMS

BATCH:MCA DIV-A

GANPAT UNIVERSITY

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Create following tables Salesman,Customer and Orderr with appropriate field name,data types,size and constraints.

1   Salesman

```
SQL> select * from salesman;

     SNUM SNAME                CITY             COMMISSION
---------- -------------------- ---------------- ----------
     1001 piyush               london                   12
     1002 niraj                surat                    13
     1003 miti                 london                   11
     1004 rajesh               baroda                   15
     1005 anand                new delhi                10
     1006 ram                  patan                    10
     1007 ashvin               siddhpur                  9

7 rows selected.
```

      SNUM: A Unique number assign to each salesman

      SNAME: The name of salesman

      CITY: The location of salesman

      COMMISSION: The salesman commission on order

Script for creating salesman table.

```
SQL> create table salesman(
  2    snum number(4) constraint salesman_snum_pk primary key,
  3    sname varchar(20),
  4    city varchar(15),
  5    commission number(2));

Table created.
```

Script for inserting records in salesman table.

```
SQL> insert into salesman values(1001,'piyush','london',12);

1 row created.

SQL>
SQL>  insert into salesman values(1002,'niraj','surat',13);

1 row created.

SQL>
SQL>  insert into salesman values(1003,'miti','london',11);

1 row created.

SQL>
SQL>  insert into salesman values(1004,'rajesh','baroda',15);

1 row created.

SQL>
SQL> insert into salesman values(1005,'anand','new delhi',10);

1 row created.

SQL>
SQL>  insert into salesman values(1006,'ram','patan',10);

1 row created.

SQL>
SQL>  insert into salesman values(1007,'ashvin','siddhpur',9);

1 row created.
```

2 Customer

```
SQL> select * from customer;

     CNUM CNAME                CITY                 RATING        SNUM
---------- -------------------- ---------------- ---------- ----------
     2001 hardik               london                  100        1001
     2002 gita                 rome                    200        1003
     2003 laxit                surat                   200        1002
     2004 govind               bombay                  300        1002
     2005 chandu               london                  100        1001
     2006 champak              surat                   300        1007
     2007 ashvin               siddhpur                100        1004

7 rows selected.
```

CNUM: A Unique number assign to each customer
CNAME: The name of customer
CITY: The location of customer
RATING: The salesman commission on order
SNUM: A salesman number assign to this customer

Script for creating customer table

```
SQL> create table customer(
  2    cnum number(4) constraint customer_cnum_pk primary key,
  3    cname varchar(20),
  4    city varchar(15),
  5    rating number(4),
  6    snum number(4),
  7    constraint customer_snum_fk foreign key(snum) references salesman(snum));

Table created.
```

Script for inserting records in customer table

```
SQL> insert into customer values(2001,'hardik','london',100,1001);

1 row created.

SQL>
SQL> insert into customer values(2002,'gita','rome',200,1003);

1 row created.

SQL>
SQL>  insert into customer values(2003,'laxit','surat',200,1002);

1 row created.

SQL>
SQL> insert into customer values(2004,'govind','bombay',300,1002);

1 row created.

SQL>
SQL> insert into customer values(2005,'chandu','london',100,1001);

1 row created.

SQL>
SQL> insert into customer values(2006,'champak','surat',300,1007);

1 row created.

SQL>
SQL> insert into customer values(2007,'ashvin','siddhpur',100,1004);

1 row created.
```

3   Orderr

```
SQL> select * from orderr;

     ONUM     AMOUNT ODATE          CNUM       SNUM
---------- ---------- --------- ---------- ----------
      3001      18.69 10-MAR-99       2008       1007
      3002     767.19 10-MAR-99       2001       1001
      3003     1900.1 10-MAR-99       2007       1004
      3004    5160.45 10-MAR-99       2003       1002
      3005    1098.25 10-APR-99       2008       1007
      3006    1713.12 10-APR-99       2002       1003
      3007      75.75 10-MAY-99       2004       1002
      3008       4723 10-MAY-99       2006       1001
      3009    1309.95 10-MAY-99       2004       1002
      3010    9898.87 10-JUN-99       2006       1001

10 rows selected.
```

ONUM: A Unique number assign to each order

AMOUNT: Amount of order in Rupees

ODATE: The date of order

CNUM: The number of customer making the order

SNUM: The number of salesman credited with the sale

Script for creating orderrr table.

```
SQL> create table orderr(
  2   onum number(4) constraint orderr_onum_pk primary key,
  3  amount number(8,2),
  4  odate date,
  5  cnum number(4),
  6  snum number(4),
  7  constraint orderr_snum_fk foreign key(snum) references salesman(snum));

Table created.
```

Script for inserting records in orderr table

```
SQL> insert into orderr values(3001,18.69,'10-mar-99',2008,1007);
1 row created.
SQL> insert into orderr values(3002,767.19,'10-mar-99',2001,1001);
1 row created.
SQL> insert into orderr values(3003,1900.10,'10-mar-99',2007,1004);
1 row created.
SQL> insert into orderr values(3004,5160.45,'10-mar-99',2003,1002);
1 row created.
SQL> insert into orderr values(3005,1098.25,'10-apr-99',2008,1007);
1 row created.
SQL> insert into orderr values(3006,1713.12,'10-apr-99',2002,1003);
1 row created.
SQL> insert into orderr values(3007,75.75,'10-may-99',2004,1002);
1 row created.
SQL>  insert into orderr values(3008,4723.00,'10-may-99',2006,1001);
1 row created.
SQL>  insert into orderr values(3009,1309.95,'10-may-99',2004,1002);
1 row created.
SQL>  insert into orderr values(3010,9898.87,'10-june-99',2006,1001);
1 row created.
```

Solve following requests with the help of SQL query

1   List the name and types of all constraints applined on customer table.

```
SQL> select constraint_name,constraint_type from user_constraints where table_name='customer';
no rows selected
```

2   Add unique key constraint applied on name field of Salesman table.

```
SQL> alter table salesman add constraint salesman_sname_uk unique(sname);
Table altered.
```

3   Drop the Unique key constraint applied on name field of Salesman table

```
SQL> alter table salesman drop constraint salesman_sname_uk;

Table altered.
```

4   Produce the order no,amount and date of all orders

```
SQL> select onum,amount,odate from orderr;

      ONUM     AMOUNT ODATE
---------- ---------- ---------
      3001      18.69 10-MAR-99
      3002     767.19 10-MAR-99
      3003     1900.1 10-MAR-99
      3004    5160.45 10-MAR-99
      3005    1098.25 10-APR-99
      3006    1713.12 10-APR-99
      3007      75.75 10-MAY-99
      3008       4723 10-MAY-99
      3009    1309.95 10-MAY-99
      3010    9898.87 10-JUN-99

10 rows selected.
```

5   Give all the information about all the customers with salesman number 1001

```
SQL> select *from customer where snum=1001;

      CNUM CNAME                CITY                 RATING       SNUM
---------- -------------------- ---------------- ---------- ----------
      2001 hardik               london                 100       1001
      2005 chandu               london                 100       1001
```

6   Display the information in the sequence of city,sname,snum and commission

```
SQL> select city,sname,snum,commission from salesman;

CITY            SNAME                      SNUM COMMISSION
--------------- -------------------- ---------- ----------
london          piyush                     1001         12
surat           niraj                      1002         13
london          miti                       1003         11
baroda          rajesh                     1004         15
new delhi       anand                      1005         10
patan           ram                        1006         10
siddhpur        ashvin                     1007          9

7 rows selected.
```

7   List of rating followed by the name of each customer in surat.

```
SQL> select cname,rating from customer where upper(city)='SURAT';

CNAME                    RATING
-------------------- ----------
laxit                       200
champak                     300
```

8   List of snum of all salesman with orderr table without any duplicates

```
SQL> select distinct (snum)from orderr;

      SNUM
----------
      1003
      1001
      1002
      1007
      1004
```

9   List of all orders for more than Rs.1000

```
SQL> select *from orderr where amount>1000;

      ONUM     AMOUNT ODATE           CNUM       SNUM
---------- ---------- --------- ---------- ----------
      3003     1900.1 10-MAR-99       2007       1004
      3004    5160.45 10-MAR-99       2003       1002
      3005    1098.25 10-APR-99       2008       1007
      3006    1713.12 10-APR-99       2002       1003
      3008       4723 10-MAY-99       2006       1001
      3009    1309.95 10-MAY-99       2004       1002
      3010    9898.87 10-JUN-99       2006       1001

7 rows selected.
```

10   List out names and cities of all salesman in London with commission above 10%

```
SQL> select *from customer where rating <= 100 or upper(city)='ROME';

      CNUM CNAME                CITY               RATING       SNUM
---------- -------------------- ---------------- ---------- ----------
      2001 hardik               london                  100       1001
      2002 gita                 rome                    200       1003
      2005 chandu               london                  100       1001
      2007 pratik               rome                    100       1004
```

11   List all customers excluding those with rating <=100 or they are located in Rome.

```
SQL> select * from customer where not(rating<=100 or upper(city)='rome');

      CNUM CNAME              CITY              RATING      SNUM
---------- ------------------ ----------------- ---------- ----------
      2002 gita               rome                  200       1003
      2003 laxit              surat                 200       1002
      2004 govind             bombay                300       1002
      2006 champak            surat                 300       1007
      2007 ashvin             siddhpur              200       1004
```

12   List all order for more than Rs.1000 except the order of snum,1006 of 10/03/1997

```
SQL> select *from orderr where amount >1000 and not(snum=1006 and odate='10-mar-99');

      ONUM      AMOUNT ODATE        CNUM      SNUM
---------- ---------- ---------- ---------- ----------
      3003     1900.1 10-MAR-99      2007      1004
      3004    5160.45 10-MAR-99      2003      1002
      3005    1098.25 10-APR-99      2008      1007
      3006    1713.12 10-APR-99      2002      1003
      3008       4723 10-MAY-99      2006      1001
      3009    1309.95 10-MAY-99      2004      1002
      3010    9898.87 10-JUN-99      2006      1001

7 rows selected.
```

13   List all orders taken on october 3rd or 4th or 6th 1997

```
SQL> select *from orderr where odate in('3-oct-99','4-oct-99','6-oct-99');

no rows selected
```

14   List all customers whose names begin with a letter 'c'.

```
SQL> select *from customer where cname like 'c%';

      CNUM CNAME              CITY              RATING      SNUM
---------- ------------------ ----------------- ---------- ----------
      2005 chandu             london                100       1001
      2006 champak            surat                 300       1007
```

15   List all customers whose names begins with letter 'A' to 'G'

```
SQL> select *from customer where substr(cname,1,1) between 'a'and 'g';

      CNUM CNAME              CITY              RATING      SNUM
---------- ------------------ ----------------- ---------- ----------
      2002 gita               rome                  200       1003
      2004 govind             bombay                300       1002
      2005 chandu             london                100       1001
      2006 champak            surat                 300       1007
```

16   List all orders with zero or NULL values

```
SQL> select *from orderr  where amount=0 or amount is null;

no rows selected
```

17   Find out the largest orders of salesman 1002 and 1007

```
SQL> select snum , max(amount) max from orderr group by snum having snum=1002 or snum=1007;

      SNUM        MAX
---------- ----------
      1002    5160.45
      1007    1098.25
```

18   Count all orders of 10-Mar-99.

```
SQL> select count(odate) as "No of orders of 10-mar-99" from orderr where odate='10=mar-99';

No of orders of 10-mar-99
-------------------------
                        4
```

19   Calculate the total amount ordered

```
SQL> select sum(amount) as "Total amount of orders" from orderr;

Total amount of orders
----------------------
              26665.37
```

20   Calculate the average amount ordered

```
SQL> select avg(amount) from orderr;

AVG(AMOUNT)
-----------
    2666.537
```

21   Count the no. of salesman currently having orders

```
SQL> select count (distinct snum) as "No of salesman" from orderr;

No of salesman
--------------
             5
```

22   Find the largest order taken by each salesman on each date.

```
SQL> select odate, snum, max(amount) from orderr group by snum,odate;

ODATE          SNUM MAX(AMOUNT)
--------- ---------- -----------
10-MAY-99      1002     1309.95
10-JUN-99      1001     9898.87
10-MAR-99      1001      767.19
10-MAR-99      1004      1900.1
10-MAR-99      1002     5160.45
10-APR-99      1007     1098.25
10-MAY-99      1001         4723
10-APR-99      1003     1713.12
10-MAR-99      1007       18.69

9 rows selected.
```

23   Find the largest order taken by each salesman on 10/03/1997

```
SQL> select odate,snum,max(amount) from orderr where odate='10-mar-99' group by snum,odate;

ODATE          SNUM MAX(AMOUNT)
--------- ---------- -----------
10-MAR-99      1001      767.19
10-MAR-99      1004      1900.1
10-MAR-99      1002     5160.45
10-MAR-99      1007       18.69
```

24   Count the no. of different non-NULL cities in the customer table

```
SQL> select count(distinct city) as "No of cities" from customer where city is not null;

No of cities
------------
           5
```

25   Find out each customer's smallest order

```
SQL> select cnum,min(amount) as "Smallest order" from orderr group by cnum;

       CNUM Smallest order
---------- ---------------
       2001          767.19
       2006            4723
       2007          1900.1
       2003         5160.45
       2004           75.75
       2008           18.69
       2002         1713.12

7 rows selected.
```

26   Find out the customer in alphabetical order whose name begins with 'G'

```
SQL> select *from customer where cname like 'g%' order by cname;

       CNUM CNAME                CITY              RATING      SNUM
---------- -------------------- ---------------- ---------- ----------
       2002 gita                 rome                 200      1003
       2004 govind               bombay               300      1002
```

27   Count the no. of salesman registering orders for each day

```
SQL> select odate,count(distinct snum) from orderr group by odate;

ODATE      COUNT(DISTINCTSNUM)
---------- --------------------
10-MAR-99                     4
10-APR-99                     2
10-MAY-99                     2
10-JUN-99                     1
```

28   List all salesman with their % of commission

```
SQL> select snum,sname,city,commission || '%' as "commission" from salesman;

     SNUM SNAME                CITY
---------- -------------------- ----------------
commission
-----------------------------------------
     1001 piyush               london
12%

     1002 niraj                surat
13%

     1003 miti                 london
11%


     SNUM SNAME                CITY
---------- -------------------- ----------------
commission
-----------------------------------------
     1004 rajesh               baroda
15%

     1005 anand                new delhi
10%

     1006 ram                  patan
10%


     SNUM SNAME                CITY
---------- -------------------- ----------------
commission
-----------------------------------------
     1007 ashvin               siddhpur
9%


7 rows selected.
```

29   Display the no. of order for each day in the following format. DD-MON-YY.

```
SQL> select odate,count(*) "No of order" from orderr group by odate;

ODATE     No of order
--------- -----------
10-MAY-99           3
10-JUN-99           1
10-APR-99           2
10-MAR-99           4
```

30   Assume each salesperson has a 12% commission.Write a query on the order
      table that will produce the order number, salesman no and amount of commission
      for that order.

```
SQL> select onum,snum,amount*12/100 commission from orderr;

      ONUM      SNUM COMMISSION
---------- ---------- ----------
      3001      1007     2.2428
      3002      1001    92.0628
      3003      1004    228.012
      3004      1002    619.254
      3005      1007     131.79
      3006      1003   205.5744
      3007      1002       9.09
      3008      1001     566.76
      3009      1002    157.194
      3010      1001  1187.8644

10 rows selected.
```