



DATABASE MANAGEMENT SYSTEM

Subject code : P11A3DMS

BATCH:MCA DIV-A



GANPAT UNIVERSITY
A.M.PATEL INSTITUTE OF COMPUTER
STUDIES

PARMAR ASHVIN RAMESHBHAI
ENROLLMENT NO: T24034211071

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 orderr 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 applied 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 |
| bombay | laxman | 1007 | 9 |
| gandhinagar | mansi | 12 | 10 |

8 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 |
| 12 | mansi | gandhinagar | 200 | 1003 |

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 | | | |
| 12% | 1001 | piyush | london |
| 13% | 1002 | niraj | surat |
| 11% | 1003 | miti | london |
| | SNUM | SNAME | CITY |
| Commission | | | |
| 15% | 1004 | rajesh | baroda |
| 10% | 1005 | anand | new delhi |
| 10% | 1006 | ram | patan |
| | SNUM | SNAME | CITY |
| Commission | | | |
| 9% | 1007 | laxman | bombay |
| 10% | 12 | mansi | gandhinagar |

8 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.

