

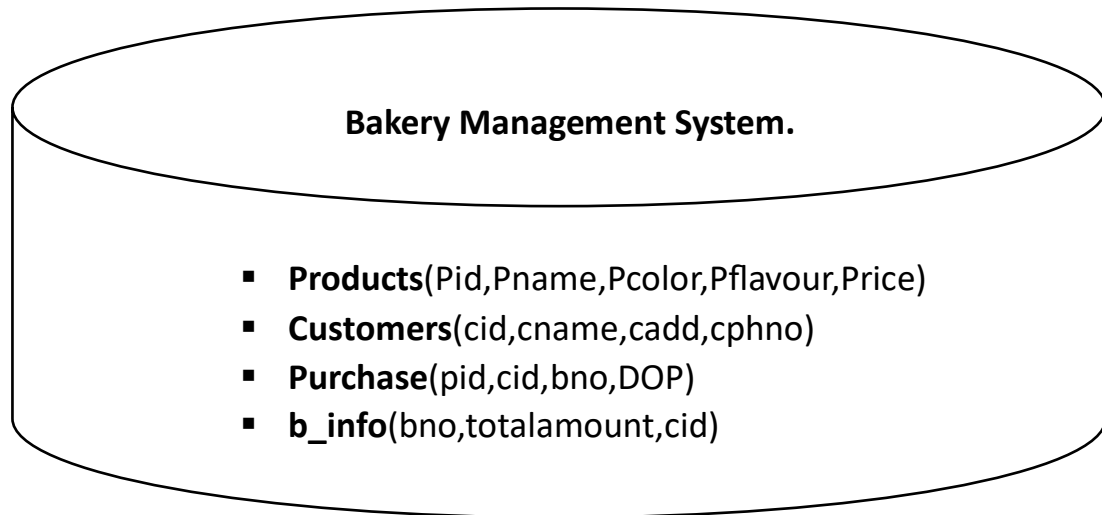
Sanjivani College Of Engineering.
(An Autonomous Institute)
Department Of Computer Engineering.
Database Management System Laboratory.

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- **Assignment No:2**

▪ **Problem Statement:**

Design at least 10 SQL queries for suitable database application using SQL DML statements:Insert,select,update,delete with operators,functions,and set operator,all types of join,sub-query and view.

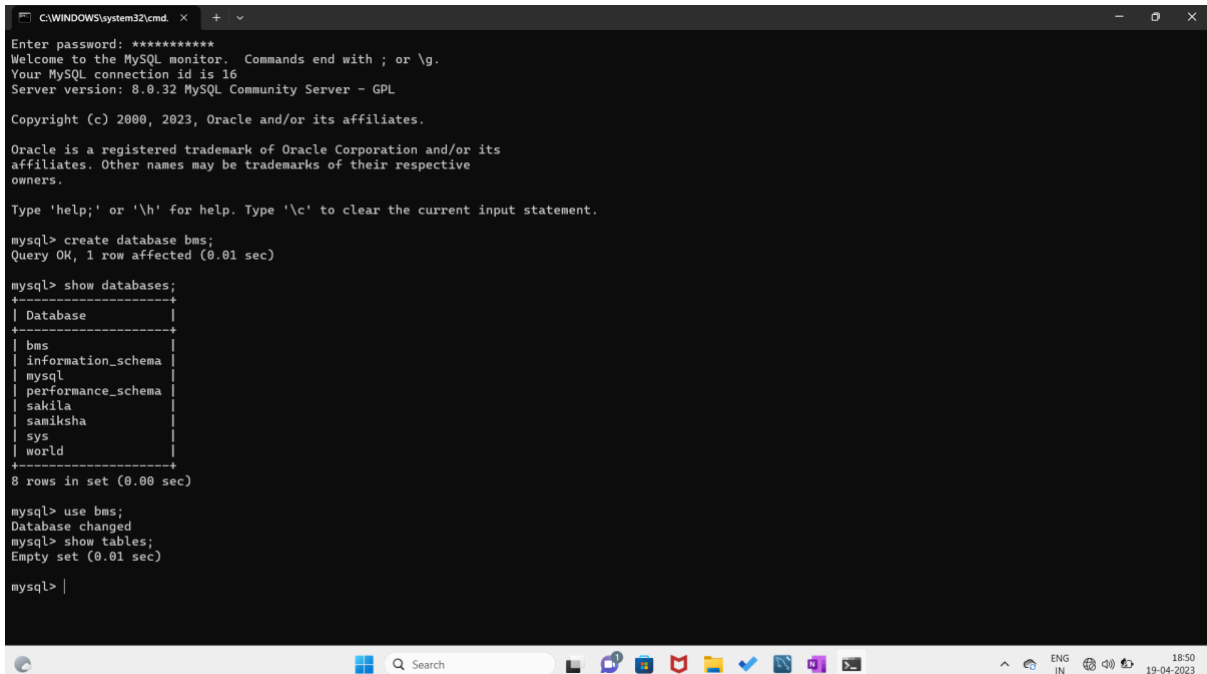
Database Name: Bakery Management System.



Commands:

1)Create a database:

create database bms;

A screenshot of a Windows command prompt window titled 'C:\WINDOWS\system32\cmd'. The window shows the MySQL command-line interface. The user has entered the MySQL password and is now at the prompt. The following commands and their outputs are shown:

```
mysql> create database bms;
Query OK, 1 row affected (0.01 sec)

mysql> show databases;
+-----+
| Database |
+-----+
| bms      |
| information_schema |
| mysql    |
| performance_schema |
| sakila   |
| samiksha |
| sys      |
| world    |
+-----+
8 rows in set (0.00 sec)

mysql> use bms;
Database changed
mysql> show tables;
Empty set (0.01 sec)

mysql> |
```

The window also displays the MySQL welcome message, including the version (8.0.32) and copyright information. The Windows taskbar is visible at the bottom, showing the search bar and various application icons.

2)Create tables:

create table products(pid int(10) primary key,pname varchar (30) not null,pcolor varchar (50),price int(15) not null);

create table customers(cid int(10) primary key,cname varchar (30) not null,cadd varchar (50),cphno int(15));

create table purchase(pid int(10) ,cid int(10),bno int(10) not null,DOP date);

create table b_info(bno int(10),total_amount int(15) not null,cid int(10));

```
C:\WINDOWS\system32\cmd. x + v
Query OK, 1 row affected (0.01 sec)

mysql> show databases;
+-----+
| Database |
+-----+
| bms      |
| information_schema |
| mysql    |
| performance_schema |
| sakila   |
| samiksha |
| sys      |
| world    |
+-----+
8 rows in set (0.00 sec)

mysql> use bms;
Database changed
mysql> show tables;
Empty set (0.01 sec)

mysql> create table products(pid int(10) primary key,pname varchar(30) not null,pcolor varchar(50),price int(15) not null);
Query OK, 0 rows affected, 2 warnings (0.02 sec)

mysql> create table customers(cid int(10) primary key,cname varchar(30) not null,cadd varchar(50),cphno int(15) not null);
Query OK, 0 rows affected, 2 warnings (0.02 sec)

mysql> create table purchase(pid int(10),cid int(10),bno int(10) not null,DOP date);
Query OK, 0 rows affected, 3 warnings (0.01 sec)

mysql> create table b_info(bno int(10),totalamount int(15) not null,cid int(10));
Query OK, 0 rows affected, 3 warnings (0.01 sec)

mysql>
```

3)Insert values:

```
insert into products values(001,'cake','brown',250,'chocolate');
insert into products values(002,'cake','yellow',200,'butterscotch');
insert into products values(003,'cake','white',220,'vanilla');
insert into products values(004,'cake','black',480,'balck current');
insert into products values(005,'cake','pink',210,'strawberry');
insert into products values(006,'cake','white',210,'white forest');
insert into products values(007,'cake','red',260,'Red velvet');
insert into products values(008,'pastry','black',120,'black forest');
insert into products values(009,'pastry','white',160,'vanilla');
insert into products values(010,'pastry','brown',180,'chocolate');
insert into products values(011,'bread','brown',80,'wheat');
insert into products values(012,'bread','white',80,'cheese');
insert into products values(013,'cream roll','yellow',80,'vanilla');
insert into products values(014,'candies','rainbow colors',380,'vanilla');
```

```
insert into customers values(001,'Mr.Mittal','Mumbai',98785745);
insert into customers values(002,'Mr.Chaterjee','Pune',915746451);
insert into customers values(003,'Mrs.Malhotra','Banglore',946578525);
insert into customers values(004,'Ms.Desai','Shirdi',94574541);
insert into customers values(005,'Mr.Kulkarni','Kolhapur',874562145);
insert into customers
values(006,'Mrs.Deshpande','Sambhajinagar',882452445);
```

```

insert into purchase values(001,002,101,'2022-02-11');
insert into purchase values(002,004,101,'2023-04-22');
insert into purchase values(003,001,103,'2023-01-02');
insert into purchase values(004,003,104,'2022-05-13');
insert into purchase values(005,006,105,'2021-08-24');
insert into purchase values(012,005,106,'2023-06-01');

```

```

insert into b_info values(101,1200,006);
insert into b_info values(102,2456,001);
insert into b_info values(103,896,005);
insert into b_info values(104,450,002);
insert into b_info values(105,3600,004);
insert into b_info values(106,2100,003);

```

```

mysql> insert into products values(101,'cake','brown',250,'chocolate');
ERROR 1062 (23000): Duplicate entry '101' for key 'products.PRIMARY'
mysql> insert into products values(001,'cake','brown',250,'chocolate');
Query OK, 1 row affected (0.00 sec)

mysql> insert into products values(002,'cake','yellow',200,'butterscotch');
Query OK, 1 row affected (0.00 sec)

mysql> insert into products values(004,'cake','black',400,'black current');
Query OK, 1 row affected (0.00 sec)

mysql> insert into products values(004,'cake','pink',210,'strawberry');
ERROR 1062 (23000): Duplicate entry '4' for key 'products.PRIMARY'
mysql> insert into products values(005,'cake','pink',210,'strawberry');
Query OK, 1 row affected (0.00 sec)

mysql> insert into products values(006,'cake','white',210,'white forest');
Query OK, 1 row affected (0.00 sec)

mysql> insert into products values(007,'cake','red',260,'Red velvet');
Query OK, 1 row affected (0.00 sec)

```

```

mysql> insert into products values(008,'pastry','black',120,'black forest');
Query OK, 1 row affected (0.00 sec)

mysql> insert into products values(009,'pastry','white',160,'vanilla');
Query OK, 1 row affected (0.00 sec)

mysql> insert into products values(010,'pastry','brown',180,'chocolate');
Query OK, 1 row affected (0.00 sec)

mysql> insert into products values(011,'bread','brown',80,'wheat');
Query OK, 1 row affected (0.00 sec)

mysql> insert into products values(012,'bread','white',80,'cheese');
Query OK, 1 row affected (0.00 sec)

mysql> insert into products values(013,'cream roll','yellow',80,'vanilla');
Query OK, 1 row affected (0.00 sec)

mysql> insert into products values(014,'candies','rainbow colors',300,'vanilla');
Query OK, 1 row affected (0.00 sec)

```

```
mysql> select * from products;
```

pid	pname	pcolor	price	pflavour
1	cake	brown	250	chocolate
2	cake	yellow	200	butterscotch
3	cake	white	220	vanilla
4	cake	black	400	black current
5	cake	pink	210	strawberry
6	cake	white	210	white forest
7	cake	red	260	Red velvet
8	pastry	black	120	black forest
9	pastry	white	160	vanilla
10	pastry	brown	180	chocolate
11	bread	brown	80	wheat
12	bread	white	80	cheese
13	cream roll	yellow	80	vanilla
14	candies	rainbow colors	300	vanilla
101	cake	brown	250	NULL

```
C:\WINDOWS\system32\cmd. x + v

mysql> insert into customers values(001,'Mr.Mittal','Mumbai',9875521530);
ERROR 1264 (22003): Out of range value for column 'cphno' at row 1
mysql> insert into customers values(001,'Mr.Mittal','Mumbai',98785745);
Query OK, 1 row affected (0.00 sec)

mysql> insert into customers values(002,'Mr.Chaterjee','Pune',915746451);
Query OK, 1 row affected (0.00 sec)

mysql> insert into customers values(002,'Mrs.Malhotra','Banglore',9465785254);
ERROR 1264 (22003): Out of range value for column 'cphno' at row 1
mysql> insert into customers values(002,'Mrs.Malhotra','Banglore',946578525);
ERROR 1062 (23000): Duplicate entry '2' for key 'customers.PRIMARY'
mysql> insert into customers values(003,'Mrs.Malhotra','Banglore',946578525);
Query OK, 1 row affected (0.00 sec)

mysql> insert into customers values(003,'Ms.Desai','Shirdi',94574541);
ERROR 1062 (23000): Duplicate entry '3' for key 'customers.PRIMARY'
mysql> insert into customers values(004,'Ms.Desai','Shirdi',94574541);
Query OK, 1 row affected (0.00 sec)

mysql> insert into customers values(005,'Mr.Kulkarni','Kolhapur',874562145);
Query OK, 1 row affected (0.00 sec)

mysql> insert into customers values(006,'Mrs.Deshpande','Sambhajinagar',882452445);
Query OK, 1 row affected (0.00 sec)

mysql> select * from customers;
+-----+-----+-----+-----+
| cid | cname | cadd | cphno |
+-----+-----+-----+-----+
| 1 | Mr.Mittal | Mumbai | 98785745 |
| 2 | Mr.Chaterjee | Pune | 915746451 |
| 3 | Mrs.Malhotra | Banglore | 946578525 |
| 4 | Ms.Desai | Shirdi | 94574541 |
| 5 | Mr.Kulkarni | Kolhapur | 874562145 |
| 6 | Mrs.Deshpande | Sambhajinagar | 882452445 |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql> |
```

```
mysql> insert into purchase values(001,002,101,'2022-02-11');
Query OK, 1 row affected (0.01 sec)

mysql> insert into purchase values(002,004,101,'2023-04-22');
Query OK, 1 row affected (0.00 sec)

mysql> insert into purchase values(003,001,103,'2023-01-02');
Query OK, 1 row affected (0.00 sec)

mysql> insert into purchase values(004,003,104,'2022-05-13');
Query OK, 1 row affected (0.00 sec)

mysql> insert into purchase values(005,006,105,'2021-08-24');
Query OK, 1 row affected (0.00 sec)

mysql> insert into purchase values(012,005,106,'2023-06-01');
Query OK, 1 row affected (0.00 sec)

mysql> select * from purchase;
+-----+-----+-----+-----+
| pid | cid | bno | DOP |
+-----+-----+-----+-----+
| 1 | 2 | 101 | 2022-02-11 |
| 2 | 4 | 101 | 2023-04-22 |
| 3 | 1 | 103 | 2023-01-02 |
| 4 | 3 | 104 | 2022-05-13 |
| 5 | 6 | 105 | 2021-08-24 |
| 12 | 5 | 106 | 2023-06-01 |
+-----+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

```
mysql> insert into b_info values(101,1200,006);
Query OK, 1 row affected (0.01 sec)

mysql> insert into b_info values(102,2456,001);
Query OK, 1 row affected (0.00 sec)

mysql> insert into b_info values(103,896,005);
Query OK, 1 row affected (0.00 sec)

mysql> insert into b_info values(104,450,002);
Query OK, 1 row affected (0.00 sec)

mysql> insert into b_info values(105,3600,004);
Query OK, 1 row affected (0.00 sec)

mysql> insert into b_info values(106,2100,003);
Query OK, 1 row affected (0.00 sec)

mysql> select * from b_info;
+-----+-----+-----+
| bno | totalamount | cid |
+-----+-----+-----+
| 101 | 1200 | 6 |
| 102 | 2456 | 1 |
| 103 | 896 | 5 |
| 104 | 450 | 2 |
| 105 | 3600 | 4 |
| 106 | 2100 | 3 |
+-----+-----+-----+
6 rows in set (0.00 sec)

mysql>
```

4)Add a extra column in a table:

alter table products add pflavour varchar(50);

```
mysql> alter table products add pflavour varchar(50);
Query OK, 0 rows affected (0.02 sec)
Records: 0 Duplicates: 0 Warnings: 0

mysql>
```

5)Update the table:

Update products set pflavour='vanilla' where pid=003;

```
mysql> update products set pflavour='vanilla' where pid=003;
Query OK, 1 row affected (0.01 sec)
Rows matched: 1 Changed: 1 Warnings: 0

mysql> update products set pflavour='vanilla' where pid=003;
```

6)Queries:

1)List of all products names:

select pname from products;

```
C:\WINDOWS\system32\cmd. x + v
Enter password: *****
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 20
Server version: 8.0.32 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use bms;
Database changed
mysql> select pname from products;
+-----+
| pname |
+-----+
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
+-----+
15 rows in set (0.00 sec)

mysql> |
```

2)Display all the customer names:

select cname from customers;

```
mysql> select cname from customers;
+-----+
| cname |
+-----+
| Mr.Mittal |
| Mr.Chatterjee |
| Mrs.Malhotra |
| Ms.Desai |
| Mr.Kulkarni |
| Mrs.Deshpande |
+-----+
6 rows in set (0.00 sec)

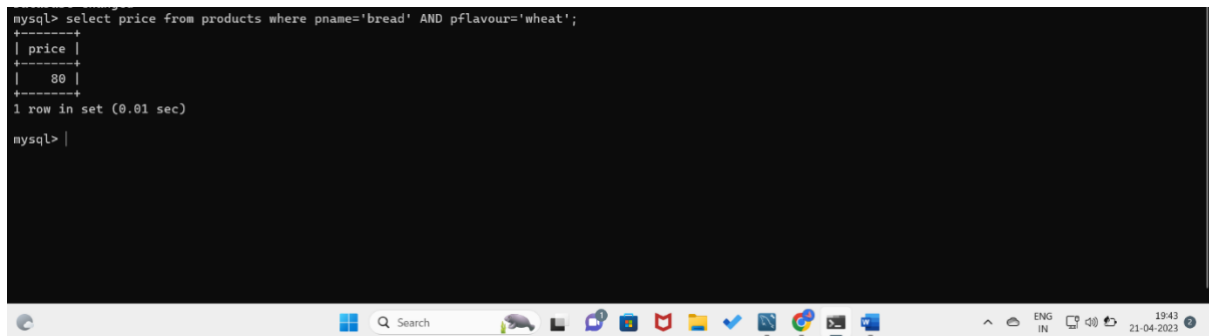
mysql>
```

3)What is the price of the wheat bread?

select price from products where pname='bread' AND pflavour='wheat';

```
mysql> select price from products where pname='bread' AND pflavour='wheat';
+-----+
| price |
+-----+
|    80 |
+-----+
1 row in set (0.01 sec)

mysql> |
```

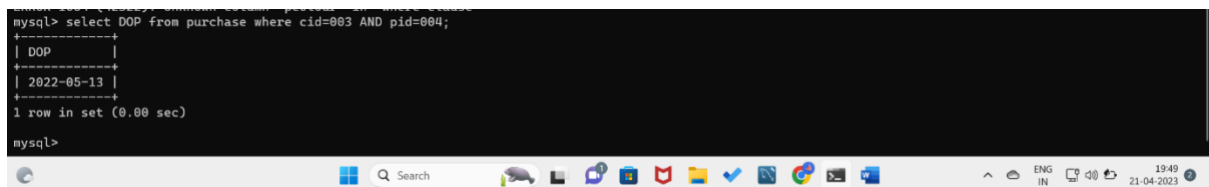


4)On which date customer with id 003 purchased the black coloured cake?

select DOP from purchase where cid=003 AND pid=004;

```
mysql> select DOP from purchase where cid=003 AND pid=004;
+-----+
| DOP   |
+-----+
| 2022-05-13 |
+-----+
1 row in set (0.00 sec)

mysql>
```

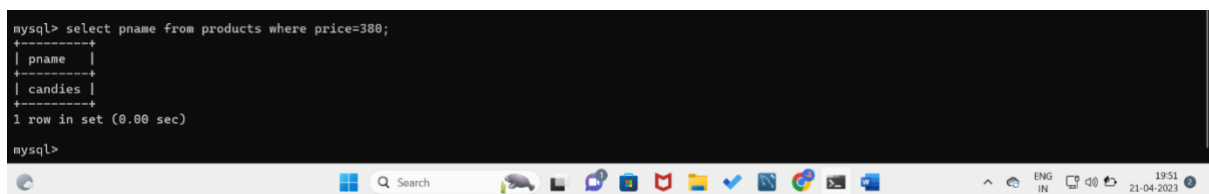


5)Display the product with the price Rs.380.

select pname from products where price=380;

```
mysql> select pname from products where price=380;
+-----+
| pname |
+-----+
| candies |
+-----+
1 row in set (0.00 sec)

mysql>
```



6)Which product is purchased by Mr.Mittal?

Select pid from purchase where cid=003;

select pname from products where pid=004;


```
mysql> Select pid from purchase where cid=003;
+-----+
| pid |
+-----+
| 4 |
+-----+
1 row in set (0.00 sec)

mysql> select pname from products where pid=004;
+-----+
| pname |
+-----+
| cake |
+-----+
1 row in set (0.00 sec)

mysql>
```

7)Select the customer name with address 'pune'?

select cname from customers where cadd='pune';

```
mysql> select cname from customers where cadd='pune';
+-----+
| cname |
+-----+
| Mr.Chaterjee |
+-----+
1 row in set (0.00 sec)

mysql>
```

8)What was the total amount paid by the customer with id 003?

select totalamount from b_info where cid=003;

```
mysql> select totalamount from b_info where cid=003;
+-----+
| totalamount |
+-----+
| 2100 |
+-----+
1 row in set (0.00 sec)

mysql>
```

9)Display the number of products with minimum price?

select count(*) from products;

select min(price) from products;

```
mysql> select count(*) from products;
+-----+
| count(*) |
+-----+
| 15 |
+-----+
1 row in set (0.02 sec)

mysql> select min(price) from products;
+-----+
| min(price) |
+-----+
| 80 |
+-----+
1 row in set (0.00 sec)

mysql> |
```

10) Display the name of the products with minimum price?

select pname from products where price=(select min(price) from products);

```
mysql> select pname from products where price=(select min(price) from products);
+-----+
| pname |
+-----+
| bread |
| bread |
| cream roll |
+-----+
3 rows in set (0.00 sec)

mysql>
```

7) View:

Create view cake

AS

Select * from products where pname='cake';

```
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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> use bms;
Database changed
mysql> create view cake AS select * from products where pname='cake';
Query OK, 0 rows affected (0.09 sec)

mysql> select * from cake;
+----+-----+-----+-----+-----+
| pid | pname | pcolor | price | pflavour |
+----+-----+-----+-----+-----+
| 1   | cake  | brown  | 250   | chocolate |
| 2   | cake  | yellow | 200   | butterscotch |
| 3   | cake  | white  | 220   | vanilla |
| 4   | cake  | black  | 480   | black current |
| 5   | cake  | pink   | 210   | strawberry |
| 6   | cake  | white  | 210   | white forest |
| 7   | cake  | red    | 260   | Red velvet |
| 101 | cake  | brown  | 250   | NULL |
+----+-----+-----+-----+-----+
8 rows in set (0.01 sec)
```

A) Horizontal view:

Create view pastry

AS

Select * from products where pname='pastry';

```
mysql> create view pastry AS select * from products where pname='pastry';
Query OK, 0 rows affected (0.01 sec)

mysql> select * from pastry;
+----+-----+-----+-----+-----+
| pid | pname | pcolor | price | pflavour |
+----+-----+-----+-----+-----+
| 8   | pastry | black  | 120   | black forest |
| 9   | pastry | white  | 160   | vanilla |
| 10  | pastry | brown  | 180   | chocolate |
+----+-----+-----+-----+-----+
3 rows in set (0.00 sec)

mysql>
```

B)Vertical view:

Create view cake_details

AS

Select pid,pname,pflavour,price from products;

```
mysql> create view cake_details AS select pid,pname,pflavour,price from products;
Query OK, 0 rows affected (0.08 sec)

mysql> select * from cake_details;
+----+-----+-----+-----+-----+
| pid | pname | pcolor | price | pflavour |
+----+-----+-----+-----+-----+
| 1   | cake  | brown  | 250   | chocolate |
| 2   | cake  | yellow | 200   | butterscotch |
| 3   | cake  | white  | 220   | vanilla |
| 4   | cake  | black  | 480   | black current |
| 5   | cake  | pink   | 210   | strawberry |
| 6   | cake  | white  | 210   | white forest |
| 7   | cake  | red    | 260   | Red velvet |
| 101 | cake  | brown  | 250   | NULL |
+----+-----+-----+-----+-----+
8 rows in set (0.00 sec)

mysql> |
```

8)Operators:

1)List the product names in the price range 100 to 250.

Select pname from products WHERE price BETWEEN 100 AND 250.

```
mysql> select pname from products WHERE price BETWEEN 100 AND 250;
+-----+
| pname |
+-----+
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
| cake  |
+-----+
9 rows in set (0.01 sec)

mysql> |
```

2)List the customer names who belong to Pune Or Mumbai City.

Select cname from customers WHERE cadd IN('Mumbai','Pune');

```
mysql> select cname from customers WHERE cadd IN('Mumbai','Pune');
+-----+
| cname |
+-----+
| Mr.Mittal |
| Mr.Chaterjee |
+-----+
2 rows in set (0.00 sec)

mysql> |
```

3)List the products id and product names where flavour begins with 'V' and has

'N' as the third character.

Select pid,pname from products WHERE pflavour LIKE 'V_N';

```
mysql> Select cname from customers where cname LIKE '%a';
+-----+
| cname |
+-----+
| Mrs.Malhotra |
+-----+
1 row in set (0.00 sec)

mysql>
```

4)List the names of the customers whose name ends with letter A.

Select cname from cutomer WHERE cname LIKE '%a';

```
mysql> Select cname from customers where cname LIKE '%a';
+-----+
| cname |
+-----+
| Mrs.Malhotra |
+-----+
1 row in set (0.00 sec)

mysql>
```

5)Display customer name who has eight characters in their name.

Select cname from customer WHERE cname LIKE _____;

```
mysql> select cname from customers where cname LIKE '____';
ERROR 1054 (42S22): Unknown column '____' in 'where clause'
mysql> select cname from customers where cname LIKE '____';
+-----+
| cname |
+-----+
| Ms.Desai |
+-----+
1 row in set (0.00 sec)

mysql> |
```