

PROJECT NAME

INVENTORY management SYSTEM

1.ABSTRACT:

Inventory management system which is helpful for the business operators, where shopke perke p the records of products, clients, orders and transport. Mismanaged inventory meansdisappointed customers ,too much cash tied up in slower sale and warehouses.This inventoryis eliminate paper work, human faults , manual delay and spe d up process.This inventory management system will have the ability to track sales and available inventory, tells ashopke per when it's time to reorder and how much to purchase.Inventory managementsystem is windows application developed for windows operating systems which focused inthe area of inventory control and generate .The software is made up of two parts: The front- end is developed using Microsoft Visual basic 2010 and the Back-end from SQL serverDatabase2008. Keywords: Database, Inventory, public, software.

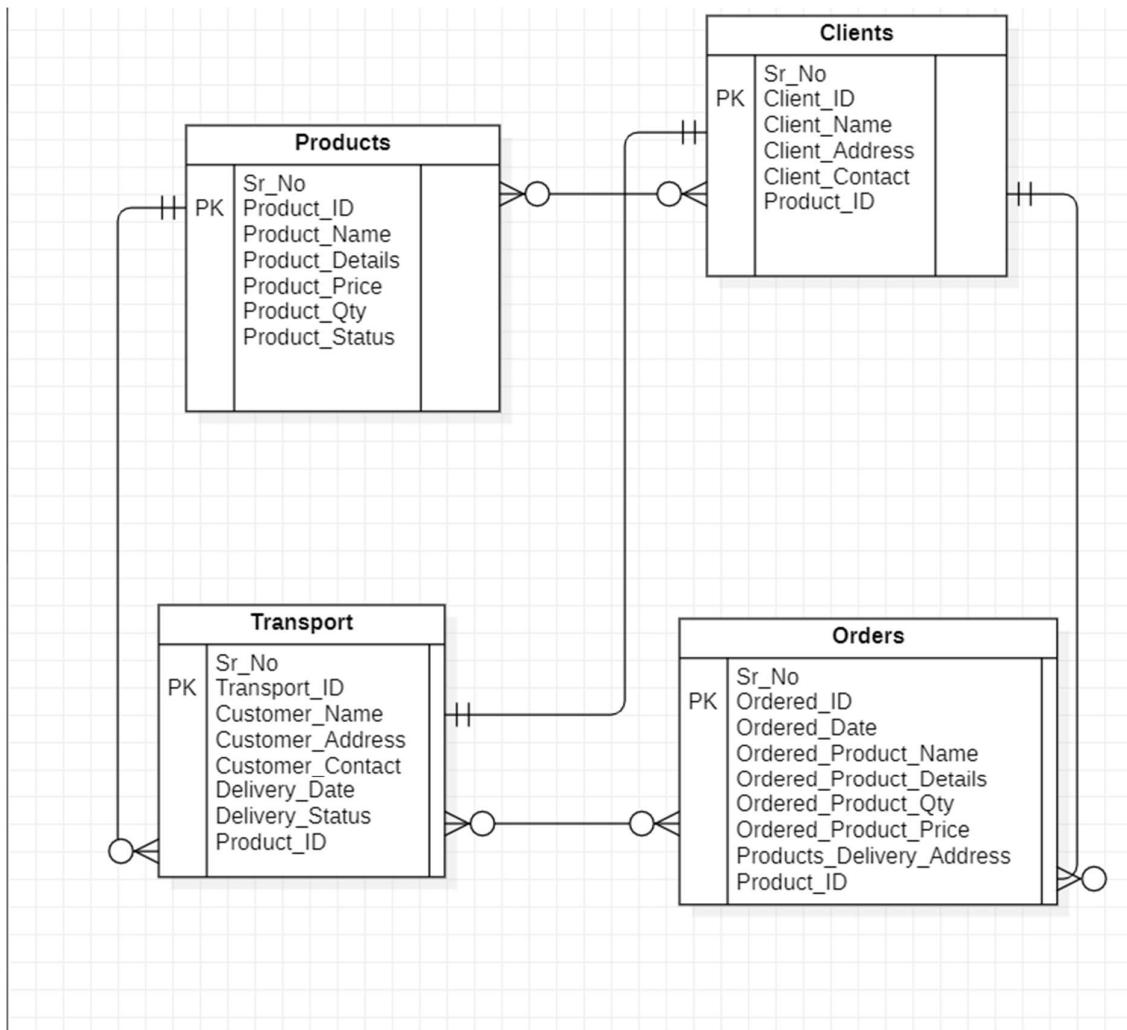
THE PROJECTS AIMS AND OBJECTIVE:

The project aims and objectives that will be achieved after completion of this project

are discussed in this sub-chapter. Theaims and objectives are as follows:

- Product tracking records.
- To check availability of products .
- To create, read, update and delete products, clients, orders and transport record.
- To check product order summary.
- To check order, delivery date, delivery status.
- To maintain all records.

2.ER Diagram:



3.Database Design:

Database: management Inventory system

Tables:

- a)Products**
- b)Clients**
- c)Orders**
- d)Transport**

4.Creating Table:

a).PRODUCTS:

```
MariaDB [sqlproject]> CREATE TABLE Products(
->     Sr_No INT ,
->     Product_Id INT PRIMARY KEY NOT NULL ,
->     Product_Name VARCHAR(45),
->     Product_Detailas VARCHAR(20),
->     Product_Price FLOAT,
->     Product_Qty INT,
->     Product_Status VARCHAR(20)
-> );
Query OK, 0 rows affected (0.084 sec)
```

b).CLIENTS:

```
MariaDB [sqlproject]> CREATE TABLE Clients(
->     Sr_No INT,
->     Client_Id INT PRIMARY KEY NOT NULL ,
->     Client_Name VARCHAR(30),
->     Client_Address VARCHAR (50),
->     Client_Contact VARCHAR(13),
->     Product_ID INT,
->     FOREIGN KEY(Product_ID) REFERENCES Products(Product_ID) ON DELETE SET NULL
-> );
Query OK, 0 rows affected (0.088 sec)
```

C).ORDERS:

```
MariaDB [sqlproject]>
MariaDB [sqlproject]> CREATE TABLE Orders(
->     Sr_No INT,
->     Order_Id INT PRIMARY KEY NOT NULL ,
->     Order_Date DATE,
->     Order_Product_Name VARCHAR(30),
->     Order_Product_Detailas VARCHAR (50),
->     Order_Product_Qty INT,
->     Order_Product_Price FLOAT,
->     Product_Delivery_Address VARCHAR(60),
->     Product_ID INT,
->     FOREIGN KEY(Product_ID) REFERENCES Clients(Product_ID) ON DELETE SET NULL
-> );
Query OK, 0 rows affected (0.073 sec)
```

d).TRANSPORT:

```
MariaDB [sqlproject]> CREATE TABLE Transport(
->   Sr_No INT,
->   Transport_Id INT PRIMARY KEY NOT NULL ,
->   Customer_Name VARCHAR(20),
->   Customer_Address VARCHAR (50),
->   Customer_Contact VARCHAR(13),
->   Delivery_Date date,
->   Delivery_Status VARCHAR(15),
->   Product_ID INT,
->   FOREIGN KEY(Product_ID) REFERENCES Orders(Product_ID) ON DELETE SET NULL
-> );
Query OK, 0 rows affected (0.090 sec)
```

5.Table in database:

```
MariaDB [sqlproject]> show tables;
+-----+
| Tables_in_sqlproject |
+-----+
| clients              |
| orders               |
| products             |
| transport            |
+-----+
4 rows in set (0.001 sec)

MariaDB [sqlproject]>
```

6.Data Defination Language(DDL):

a)Creating tables:

PRODUCTS:

```
mysql> desc Products;
+-----+-----+-----+-----+-----+-----+
| Field      | Type   | Null | Key  | Default | Extra |
+-----+-----+-----+-----+-----+-----+
| Sr_No      | int    | YES  | NO   | NULL    |       |
| Product_ID | int    | NO   | PRI  | NULL    |       |
| Product_Name| varchar(20)| YES  |       | NULL    |       |
| Product_Details| varchar(20)| YES  |       | NULL    |       |
| Product_Price | float  | YES  |       | NULL    |       |
| Product_Qty  | int    | YES  |       | NULL    |       |
| Product_Status | varchar(20)| YES  |       | NULL    |       |
+-----+-----+-----+-----+-----+-----+
7 rows in set (0.01 sec)
```

CLIENTS:

```
mysql> desc clients;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Sr_No | int  | YES  |     | NULL    |       |
| Client_ID | int  | NO   | PRI | NULL    |       |
| Client_Name | varchar(30) | YES  |     | NULL    |       |
| Client_Address | varchar(50) | YES  |     | NULL    |       |
| Client_Contact | varchar(13) | YES  |     | NULL    |       |
| Product_ID | int  | YES  | MUL | NULL    |       |
+-----+-----+-----+-----+-----+
6 rows in set (0.00 sec)
```

ORDERS:

```
mysql> desc Orders;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Sr_No | int  | YES  |     | NULL    |       |
| Ordered_ID | int  | NO   | PRI | NULL    |       |
| Ordered_Date | date | YES  |     | NULL    |       |
| Ordered_Product_Name | varchar(30) | YES  |     | NULL    |       |
| Ordered_Product_Details | varchar(50) | YES  |     | NULL    |       |
| Ordered_Product_Qty | int  | YES  |     | NULL    |       |
| Ordered_Product_Price | float | YES  |     | NULL    |       |
| Product_Delivery_Address | varchar(60) | YES  |     | NULL    |       |
| Product_ID | int  | YES  | MUL | NULL    |       |
+-----+-----+-----+-----+-----+
9 rows in set (0.00 sec)
```

TRANSPORT:

```
mysql> desc Transport;
+-----+-----+-----+-----+-----+
| Field | Type | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Sr_No | int  | YES  |     | NULL    |       |
| Transport_ID | int  | NO   | PRI | NULL    |       |
| Customer_Name | varchar(20) | YES  |     | NULL    |       |
| Customer_Address | varchar(50) | YES  |     | NULL    |       |
| Customer_Contact | varchar(13) | YES  |     | NULL    |       |
| Delivery_Date | date | YES  |     | NULL    |       |
| Delivery_Status | varchar(15) | YES  |     | NULL    |       |
| Product_ID | int  | YES  | MUL | NULL    |       |
+-----+-----+-----+-----+-----+
8 rows in set (0.00 sec)
```

b) Alter table

1) Alter table add column:

```
MariaDB [sqlproject]> alter table clients add Clients_Amount float NOT null;
Query OK, 0 rows affected (1.134 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [sqlproject]> desc clients;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Sr_No | int(11) | YES | NO   | NULL    |          |
| Client_Id | int(11) | NO  | PRI  | NULL    |          |
| Client_Name | varchar(30) | YES |      | NULL    |          |
| Client_Address | varchar(50) | YES |      | NULL    |          |
| Client_Contact | varchar(13) | YES |      | NULL    |          |
| Product_ID | int(11) | YES | MUL  | NULL    |          |
| Clients_Amount | float  | NO  |      | NULL    |          |
+-----+-----+-----+-----+-----+
7 rows in set (0.018 sec)
```

2) Alter table modify column:

```
MariaDB [sqlproject]> alter table clients modify Clients_Amount int;
Query OK, 0 rows affected (0.223 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [sqlproject]> desc clients;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Sr_No | int(11) | YES | NO   | NULL    |          |
| Client_Id | int(11) | NO  | PRI  | NULL    |          |
| Client_Name | varchar(30) | YES |      | NULL    |          |
| Client_Address | varchar(50) | YES |      | NULL    |          |
| Client_Contact | varchar(13) | YES |      | NULL    |          |
| Product_ID | int(11) | YES | MUL  | NULL    |          |
| Clients_Amount | int(11) | YES |      | NULL    |          |
+-----+-----+-----+-----+-----+
7 rows in set (0.018 sec)
```

3) Alter table rename column:

```
MariaDB [sqlproject]> alter table clients change Clients_Amount Clients_Payment int;
Query OK, 0 rows affected (0.024 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [sqlproject]> desc clients;
+-----+-----+-----+-----+-----+
| Field | Type  | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Sr_No | int(11) | YES | NO   | NULL    |          |
| Client_Id | int(11) | NO  | PRI  | NULL    |          |
| Client_Name | varchar(30) | YES |      | NULL    |          |
| Client_Address | varchar(50) | YES |      | NULL    |          |
| Client_Contact | varchar(13) | YES |      | NULL    |          |
| Product_ID | int(11) | YES | MUL  | NULL    |          |
| Clients_Payment | int(11) | YES |      | NULL    |          |
+-----+-----+-----+-----+-----+
7 rows in set (0.014 sec)
```

4)Alter table drop column:

```
MariaDB [sqlproject]> alter table clients drop Clients_Payment;
Query OK, 0 rows affected (0.054 sec)
Records: 0  Duplicates: 0  Warnings: 0

MariaDB [sqlproject]> desc clients;
+-----+-----+-----+-----+-----+
| Field      | Type       | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Sr_No      | int(11)    | YES  |     | NULL    |       |
| Client_Id   | int(11)    | NO   | PRI | NULL    |       |
| Client_Name | varchar(30) | YES  |     | NULL    |       |
| Client_Address | varchar(50) | YES  |     | NULL    |       |
| Client_Contact | varchar(13) | YES  |     | NULL    |       |
| Product_ID  | int(11)    | YES  | MUL | NULL    |       |
+-----+-----+-----+-----+-----+
6 rows in set (0.013 sec)
```

c) Rename table:

```
MariaDB [sqlproject]> alter table Clients_Info rename to Clients;
Query OK, 0 rows affected (0.031 sec)

MariaDB [sqlproject]> desc clients;
+-----+-----+-----+-----+-----+
| Field      | Type       | Null | Key | Default | Extra |
+-----+-----+-----+-----+-----+
| Sr_No      | int(11)    | YES  |     | NULL    |       |
| Client_Id   | int(11)    | NO   | PRI | NULL    |       |
| Client_Name | varchar(30) | YES  |     | NULL    |       |
| Client_Address | varchar(50) | YES  |     | NULL    |       |
| Client_Contact | varchar(13) | YES  |     | NULL    |       |
| Product_ID  | int(11)    | YES  | MUL | NULL    |       |
+-----+-----+-----+-----+-----+
6 rows in set (0.016 sec)
```

d) Truncate table

```
MariaDB [sqlproject]> Truncate test;
Query OK, 0 rows affected (0.072 sec)
```

e) Drop table

```
MariaDB [sqlproject]> show tables;
+-----+
| Tables_in_sqlproject |
+-----+
| clients
| orders
| products
| transport
+-----+
4 rows in set (0.001 sec)

MariaDB [sqlproject]>
```

7)Data Manipulation language (DML)

a.Insert into table

```
MariaDB [sqlproject]> INSERT INTO PRODUCTS values (1,101,'Tranformer','Transformer_250KVA',300000,1,'Available');
Query OK, 1 row affected (0.017 sec)

MariaDB [sqlproject]> select * from products;
+-----+-----+-----+-----+-----+-----+-----+
| Sr_No | Product_Id | Product_Name | Product_Detailas | Product_Price | Product_Qty | Product_Status |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | 101 | Tranformer | Transformer_250KVA | 300000 | 1 | Available |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.003 sec)
```

b.Update into table

```
MariaDB [sqlproject]> update transport set transport_id=907 where product_id=110;
Query OK, 1 row affected (0.011 sec)
Rows matched: 1  Changed: 1  Warnings: 0

MariaDB [sqlproject]> select * from transport;
+-----+-----+-----+-----+-----+-----+-----+-----+
| Sr_No | Transport_Id | Customer_Name | Customer_Address | Customer_Contact | Delivery_Date | Delivery_Status | Product_ID |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | 901 | KC_Engineering_Pvt._ | Thane | +91979258635 | 2022-09-05 | Delivered | 109 |
| 2 | 902 | Harsh_Engineering_Pv | Bandra | +91989258675 | 2022-10-20 | In_Transit | 107 |
| 3 | 903 | Tejas_Engineering_Pv | Andheri | +91999258675 | 2022-09-20 | Delivered | 112 |
| 4 | 904 | Volt=Amp | Thane | +91989258275 | 2022-10-17 | In_Transit | 101 |
| 5 | 905 | Suraj_Engineering_Pv | Thane | +91979258675 | 2022-09-13 | Delivered | 116 |
| 6 | 907 | Aryan_Electricals | Dombivali | +91939258625 | 2022-10-04 | OrderNot_Placed | 110 |
+-----+-----+-----+-----+-----+-----+-----+-----+
6 rows in set (0.001 sec)
```

c.Delete into table

```
MariaDB [sqlproject]> delete from orders where order_id=1001;
Query OK, 1 row affected (0.008 sec)

MariaDB [sqlproject]> select * from orders;
Empty set (0.000 sec)
```

8.Data Query Language (DQL)

a.Select query

```
MariaDB [sqlproject]> select * from products;
```

Sr_No	Product_Id	Product_Name	Product_Detailas	Product_Price	Product_Qty	Product_Status
1	101	Tranformer	Transformer_250KVA	300000	1	Available
2	102	Motor	Motor_5HP_upto_200HP	200000	50	Available
3	103	DG	DG_50KVA_upto_1MVA	400000	20	Available
4	104	VCB	VCB_600A_upto_2500A	100000	5	Available
5	105	OCB	OCB_100A_1200A	80000	0	Not_Available
6	106	LT_PANELS	LT_Panels_as_per_req	700000	30	Available
7	107	MCCB	MCCB_80A_upto_250A	15500	50	Available
8	108	MCB	MCB_4A_upto_80A	5000	100	Available
9	109	CABLES	CABLES_2.5Sqmm_upto_	400000	70	Available
10	110	EARTHING_ROD	EARTHING_ROD_3MTR_&	30000	0	Not_Available
11	111	LUGS	LUGS_2.5Sqmm_upto_60	3000	200	Available
12	112	LED_LIGHTS	LED_LIGHTS_6W_upto_2	20000	120	Available
13	113	BUSBAR	BUSBAR_as_per_requir	25000	0	Not_Available
14	114	DB	DBS_4_Way_upto_16Way	7500	300	Available
15	115	ISOLATOR	ISOLATOR_6A_upto_63A	1200	0	Not_Available
16	116	SWITCH_SOCKET	SWITCH_SOCKET_2Modul	900	180	Available
17	117	SMOKE_DETECTOR	SMOKE_DETECTOR_as_pe	1350	500	Available
18	118	CABLE_TRAY	CABLE_TRAY	0	0	Not_Available
19	119	STREET_LIGHT	STREET_LIGHT_60W_upt	4000	300	Available
20	120	CONDUIT	CONDUIT	0	0	Not_Available

```
20 rows in set (0.001 sec)
```

```
MariaDB [sqlproject]> select * from clients;
```

Sr_No	Client_Id	Client_Name	Client_Address	Client_Contact	Product_ID
1	501	Harsh_Engineering_Pvt._Ltd.	Bandra	+91989258675	107
2	502	Tejas_Engineering_Pvt._Ltd.	Andheri	+91999258675	112
3	503	Suraj_Engineering_Pvt._Ltd.	Thane	+91979258675	116
4	504	Rave_Design LLP	Andheri	+91969258695	104
5	505	Jackson	Delhi	+91979255675	103
6	506	ABB_Pvt._Ltd.	Mumbai	+91959258375	113
7	507	ACC_Pvt._Ltd.	Pune	+91999258676	116
8	508	Bharat_Bijlee	Navi_Mumbai	+91989358645	102
9	509	KC_Engineering_Pvt._Ltd.	Thane	+91979258635	109
10	510	Pragati_Electricals	Thane	+91959258673	118
11	511	Aryan_Electricals	Dombivali	+91939258625	110
12	512	Vinod_Electricals	Powai	+91989758673	120
13	513	CAD_Solution	Mumbai	+91988258672	114
14	514	Volt=Amp	Thane	+91989258275	101
15	515	Siemens	Airoli	+91989758672	105

```
15 rows in set (0.001 sec)
```

b.Order by query ASC.

```
MariaDB [sqlproject]> select * from products order by Product_Price ASC;
```

Sr_No	Product_Id	Product_Name	Product_Detailas	Product_Price	Product_Qty	Product_Status
20	120	CONDUIT	CONDUIT	0	0	Not_Available
18	118	CABLE_TRAY	CABLE_TRAY	0	0	Not_Available
16	116	SWITCH_SOCKET	SWITCH_SOCKET_2Modul	900	180	Available
15	115	ISOLATOR	ISOLATOR_6A_upto_63A	1200	0	Not_Available
17	117	SMOKE_DETECTOR	SMOKE_DETECTOR_as_pe	1350	500	Available
11	111	LUGS	LUGS_2.5Sqmm_upto_60	3000	200	Available
19	119	STREET_LIGHT	STREET_LIGHT_60W_upt	4000	300	Available
8	108	MCB	MCB_4A_upto_80A	5000	100	Available
14	114	DB	DBS_4_Way_upto_16Way	7500	300	Available
7	107	MCCB	MCCB_80A_upto_250A	15500	50	Available
12	112	LED_LIGHTS	LED_LIGHTS_6W_upto_2	20000	120	Available
13	113	BUSBAR	BUSBAR_as_per_requir	25000	0	Not_Available
10	110	EARTHING_ROD	EARTHING_ROD_3MTR_&	30000	0	Not_Available
5	105	OCB	OCB_100A_1200A	80000	0	Not_Available
4	104	VCB	VCB_600A_upto_2500A	100000	5	Available
2	102	Motor	Motor_5HP_upto_200HP	200000	50	Available
1	101	Tranformer	Transformer_250KVA	300000	1	Available
3	103	DG	DG_50KVA_upto_1MVA	400000	20	Available
9	109	CABLES	CABLES_2.5Sqmm_upto_	400000	70	Available
6	106	LT_PANELS	LT_Panels_as_per_req	700000	30	Available

20 rows in set (0.002 sec)

C.Order by query DESC

```
MariaDB [sqlproject]> select * from products order by Product_Price desc;
```

Sr_No	Product_Id	Product_Name	Product_Detailas	Product_Price	Product_Qty	Product_Status
6	106	LT_PANELS	LT_Panels_as_per_req	700000	30	Available
9	109	CABLES	CABLES_2.5Sqmm_upto_	400000	70	Available
3	103	DG	DG_50KVA_upto_1MVA	400000	20	Available
1	101	Tranformer	Transformer_250KVA	300000	1	Available
2	102	Motor	Motor_5HP_upto_200HP	200000	50	Available
4	104	VCB	VCB_600A_upto_2500A	100000	5	Available
5	105	OCB	OCB_100A_1200A	80000	0	Not_Available
10	110	EARTHING_ROD	EARTHING_ROD_3MTR_&	30000	0	Not Available
13	113	BUSBAR	BUSBAR_as_per_requir	25000	0	Not Available
12	112	LED_LIGHTS	LED_LIGHTS_6W_upto_2	20000	120	Available
7	107	MCCB	MCCB_80A_upto_250A	15500	50	Available
14	114	DB	DBS_4_Way_upto_16Way	7500	300	Available
8	108	MCB	MCB_4A_upto_80A	5000	100	Available
19	119	STREET_LIGHT	STREET_LIGHT_60W_upt	4000	300	Available
11	111	LUGS	LUGS_2.5Sqmm_upto_60	3000	200	Available
17	117	SMOKE_DETECTOR	SMOKE_DETECTOR_as_pe	1350	500	Available
15	115	ISOLATOR	ISOLATOR_6A_upto_63A	1200	0	Not Available
16	116	SWITCH_SOCKET	SWITCH_SOCKET_2Modul	900	180	Available
18	118	CABLE_TRAY	CABLE_TRAY	0	0	Not Available
20	120	CONDUIT	CONDUIT	0	0	Not Available

20 rows in set (0.001 sec)

d.Order by column

```
MariaDB [sqlproject]> select * from clients order by Client_Address,Client_Name;
+-----+-----+-----+-----+-----+-----+
| Sr_No | Client_Id | Client_Name           | Client_Address | Client_Contact | Product_ID |
+-----+-----+-----+-----+-----+-----+
|    15 |      515 | Siemens                | Airoli        | +91989758672  |     105 |
|     4 |      504 | Rave_Design LLP       | Andheri       | +91969258695  |     104 |
|     2 |      502 | Tejas_Engineering Pvt. Ltd. | Andheri       | +91999258675  |     112 |
|     1 |      501 | Harsh_Engineering Pvt. Ltd. | Bandra        | +91989258675  |     107 |
|     5 |      505 | Jackson                | Delhi         | +91979255675  |     103 |
|    11 |      511 | Aryan_Electricals      | Dombivali    | +91939258625  |     110 |
|     6 |      506 | ABB_Pvt._Ltd.          | Mumbai        | +91959258375  |     113 |
|    13 |      513 | CAD_Solution           | Mumbai        | +91988258672  |     114 |
|     8 |      508 | Bharat_Bijlee           | Navi_Mumbai  | +91989358645  |     102 |
|    12 |      512 | Vinod_Electricals      | Powai         | +91989758673  |     120 |
|     7 |      507 | ACC_Pvt._Ltd.          | Pune          | +91999258676  |     116 |
|     9 |      509 | KC_Engineering Pvt. Ltd. | Thane         | +91979258635  |     109 |
|   10 |      510 | Pragati_Electricals    | Thane         | +91959258673  |     118 |
|     3 |      503 | Suraj_Engineering Pvt. Ltd. | Thane         | +91979258675  |     116 |
|   14 |      514 | Volt=Amp               | Thane         | +91989258275  |     101 |
+-----+-----+-----+-----+-----+-----+
15 rows in set (0.001 sec)
```

e.Limit query

```
MariaDB [sqlproject]> select * from clients limit 5;
+-----+-----+-----+-----+-----+
| Sr_No | Client_Id | Client_Name           | Client_Address | Client_Contact | Product_ID |
+-----+-----+-----+-----+-----+
|     1 |      501 | Harsh_Engineering Pvt. Ltd. | Bandra        | +91989258675  |     107 |
|     2 |      502 | Tejas_Engineering Pvt. Ltd. | Andheri       | +91999258675  |     112 |
|     3 |      503 | Suraj_Engineering Pvt. Ltd. | Thane         | +91979258675  |     116 |
|     4 |      504 | Rave_Design LLP       | Andheri       | +91969258695  |     104 |
|     5 |      505 | Jackson                | Delhi         | +91979255675  |     103 |
+-----+-----+-----+-----+-----+
5 rows in set (0.001 sec)
```

f.Select query with specific column

```
MariaDB [sqlproject]> select Customer_Name,Delivery_Status from transport;
+-----+-----+
| Customer_Name | Delivery_Status |
+-----+-----+
| KC_Engineering Pvt. | Delivered |
| Harsh_Engineering Pv | In_Tranit |
| Tejas_Engineering Pv | Delivered |
| Volt=Amp | In_Transit |
| Suraj_Engineering Pv | Delivered |
| Aryan_Electricals | OrderNot_Placed |
+-----+-----+
6 rows in set (0.000 sec)
```

g.Select query with column name change

```
MariaDB [sqlproject]> select Customer_Name as Cust_Name,Delivery_Status as D_Status from transport;
+-----+-----+
| Cust_Name | D_Status |
+-----+-----+
| KC_Engineering Pvt. | Delivered |
| Harsh_Engineering Pv | In_Tranit |
| Tejas_Engineering Pv | Delivered |
| Volt=Amp | In_Transit |
| Suraj_Engineering Pv | Delivered |
| Aryan_Electricals | OrderNot_Placed |
+-----+-----+
6 rows in set (0.002 sec)
```

h.Distinct query

```
MariaDB [sqlproject]> select distinct(Customer_Address) from transport;
+-----+
| Customer_Address |
+-----+
| Thane
| Bandra
| Andheri
| Dombivali
+-----+
4 rows in set (0.000 sec)
```

9.Using where clause

a.With Comparision Operator

```
MariaDB [sqlproject]> select * from clients where Client_Address='Thane';
+-----+-----+-----+-----+-----+-----+
| Sr_No | Client_Id | Client_Name           | Client_Address | Client_Contact | Product_ID |
+-----+-----+-----+-----+-----+-----+
|    3  |      503  | Suraj_Engineering_Pvt._Ltd. | Thane          | +91979258675   |     116  |
|    9  |      509  | KC_Engineering_Pvt._Ltd.   | Thane          | +91979258635   |     109  |
|   10  |      510  | Pragati_Electricals       | Thane          | +91959258673   |     118  |
|   14  |      514  | Volt=Amp                  | Thane          | +91989258275   |     101  |
+-----+-----+-----+-----+-----+-----+
4 rows in set (0.005 sec)
```

```
MariaDB [sqlproject]> select order_id,Order_product_name,Product_Delivery_address from orders where order_date>='2022-09-10';
+-----+-----+-----+
| order_id | Order_product_name | Product_Delivery_address |
+-----+-----+-----+
| 1002 | MCCB             | Bandra
| 1003 | LED_LIGHTS        | Andheri
| 1005 | OCB              | Airoli
| 1006 | Transformer        | Thane
| 1007 | CONDUIT           | Powai
| 1010 | EARTHING_ROD      | Dombivali
| 1012 | SWITCH_SOCKET      | Pune
+-----+-----+-----+
7 rows in set (0.000 sec)

MariaDB [sqlproject]>
```

```
MariaDB [sqlproject]> select * from transport where Delivery_Status='Deliverd';
+-----+-----+-----+-----+-----+-----+-----+
| Sr_No | Transport_Id | Customer_Name       | Customer_Address | Customer_Contact | Delivery_Date | Delivery_Status | Product_ID |
+-----+-----+-----+-----+-----+-----+-----+
|    1  |      901  | KC_Engineering_Pvt._ | Thane          | +91979258635   | 2022-09-05 | Deliverd      |     109  |
|    3  |      903  | Tejas_Engineering_Pv | Andheri        | +91999258675   | 2022-09-20 | Deliverd      |     112  |
|    5  |      905  | Suraj_Engineering_Pv | Thane          | +91979258675   | 2022-09-13 | Deliverd      |     116  |
+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.001 sec)
```

10.Using Logical Operator

a.Using AND operator

```
MariaDB [sqlproject]> select * from transport where Customer_Address='Thane' and Delivery_Status='Deliverd';
+-----+-----+-----+-----+-----+-----+-----+
| Sr_No | Transport_Id | Customer_Name      | Customer_Address | Customer_Contact | Delivery_Date   | Delivery_Status |
+-----+-----+-----+-----+-----+-----+-----+
|    1  |      901  | KC_Engineering_Pvt._ | Thane           | +91979258635  | 2022-09-05   | Deliverd       |
|    5  |      905  | Suraj_Engineering_Pv | Thane           | +91979258675  | 2022-09-13   | Deliverd       |
+-----+-----+-----+-----+-----+-----+-----+
2 rows in set (0.003 sec)
```

b.Using OR operator

```
MariaDB [sqlproject]> select * from products where Product_Status='Not_Available' or product_price<=5000;
+-----+-----+-----+-----+-----+-----+-----+
| Sr_No | Product_Id | Product_Name      | Product_Details | Product_Price | Product_Qty | Product_Status |
+-----+-----+-----+-----+-----+-----+-----+
|    5  |      105  | OCB             | OCB_100A_1200A |     80000    |      0      | Not_Available |
|    8  |      108  | MCB             | MCB_4A_upto_80A |      5000    |     100     | Available     |
|   10  |      110  | EARTHING_ROD    | EARTHING_ROD_3MTR_& | 30000    |      0      | Not_Available |
|   11  |      111  | LUGS             | LUGS_2.55qmm_upto_60 | 3000    |     200     | Available     |
|   13  |      113  | BUSBAR           | BUSBAR_as_per_requir | 25000    |      0      | Not_Available |
|   15  |      115  | ISOLATOR         | ISOLATOR_6A_uptp_63A | 1200    |      0      | Not_Available |
|   16  |      116  | SWITCH_SOCKET    | SWITCH_SOCKET_2Modul | 900    |     180     | Available     |
|   17  |      117  | SMOKE_DETECTOR  | SMOKE_DETECTOR_as_pe | 1350    |     500     | Available     |
|   18  |      118  | CABLE_TRAY        | CABLE_TRAY          | 0    |      0      | Not_Available |
|   19  |      119  | STREET_LIGHT      | STREET_LIGHT_60W_upt | 4000    |     300     | Available     |
|   20  |      120  | CONDUIT           | CONDUIT            | 0    |      0      | Not_Available |
+-----+-----+-----+-----+-----+-----+-----+
11 rows in set (0.002 sec)
```

c.Using between clause

```
MariaDB [sqlproject]> select * from orders where Order_date between '2022-10-04' and '2022-10-15';
+-----+-----+-----+-----+-----+-----+-----+-----+
| Sr_No | Order_Id | Order_Date      | Order_Product_Name | Order_Product_Details | order_product_qty | Order_Product_Price | Product_Delivery_Address | Product_ID |
+-----+-----+-----+-----+-----+-----+-----+-----+
|    2  |      1002 | 2022-10-15    | MCCB              | 63A_MCCB           | 150Nos          | 150000          | Bandra           | 107 |
|    6  |      1006 | 2022-10-06    | Transformer        | 500KVA_Transformer | 7Nos           | 800000          | Thane            | 101 |
|   10  |      1010 | 2022-10-04    | EARTHING_ROD      | 6Mtr_GU_Eartthing_Rod | 20Nos          | 400000          | Dombivali        | 110 |
+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.002 sec)
```

d.Using IN clause

```
MariaDB [sqlproject]> select * from products where product_Id in (105,110,115,120);
+-----+-----+-----+-----+-----+-----+-----+
| Sr_No | Product_Id | Product_Name      | Product_Details | Product_Price | Product_Qty | Product_Status |
+-----+-----+-----+-----+-----+-----+-----+
|    5  |      105  | OCB             | OCB_100A_1200A |     80000    |      0      | Not_Available |
|   10  |      110  | EARTHING_ROD    | EARTHING_ROD_3MTR_& | 30000    |      0      | Not_Available |
|   15  |      115  | ISOLATOR         | ISOLATOR_6A_uptp_63A | 1200    |      0      | Not_Available |
|   20  |      120  | CONDUIT           | CONDUIT          | 0    |      0      | Not_Available |
+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.004 sec)
```

11. Aggregate function

a.Count function

```
MariaDB [sqlproject]> select count(Product_id) from products;
+-----+
| count(Product_id) |
+-----+
|          20 |
+-----+
1 row in set (0.005 sec)
```

b.Average function

```
MariaDB [sqlproject]> select avg(Product_price) from products;
+-----+
| avg(Product_price) |
+-----+
|      114672.5 |
+-----+
1 row in set (0.002 sec)
```

c.Sum function

```
MariaDB [sqlproject]> select sum(Product_price) from products;
+-----+
| sum(Product_price) |
+-----+
|      2293450 |
+-----+
1 row in set (0.001 sec)
```

12.Group By clause

```
MariaDB [sqlproject]> select count(Product_Status),product_status from products group by product_status;
+-----+-----+
| count(Product_Status) | product_status |
+-----+-----+
|          14 | Available      |
|           6 | Not_Available |
+-----+
2 rows in set (0.001 sec)

MariaDB [sqlproject]>
```

```
MariaDB [sqlproject]> select sum(order_product_price),order_id from orders group by product_id;
+-----+-----+
| sum(order_product_price) | order_id |
+-----+-----+
|       800000 |     1006 |
|      550000 |     1009 |
|      600000 |     1005 |
|     150000 |     1002 |
|     200000 |     1001 |
|     400000 |     1010 |
|      80000 |     1003 |
|     300000 |     1008 |
|     306000 |     1004 |
|     450000 |     1007 |
+-----+
10 rows in set (0.001 sec)
```

```
MariaDB [sqlproject]> select sum(order_product_price),order_id from orders group by order_id;
+-----+-----+
| sum(order_product_price) | order_id |
+-----+-----+
|      200000 |     1001 |
|      150000 |     1002 |
|       80000 |     1003 |
|     300000 |     1004 |
|     600000 |     1005 |
|     800000 |     1006 |
|     450000 |     1007 |
|     300000 |     1008 |
|     550000 |     1009 |
|     400000 |     1010 |
|       5000 |     1011 |
|       1000 |     1012 |
+-----+
12 rows in set (0.001 sec)
```

13.Like operator

```
MariaDB [sqlproject]> select * from clients where client_name like '%Ltd.';
+-----+-----+-----+-----+-----+-----+
| Sr_No | Client_Id | Client_Name | Client_Address | Client_Contact | Product_ID |
+-----+-----+-----+-----+-----+-----+
|    1 |      501 | Harsh_Engineering_Pvt._Ltd. | Bandra | +91989258675 |     107 |
|    2 |      502 | Tejas_Engineering_Pvt._Ltd. | Andheri | +91999258675 |     112 |
|    3 |      503 | Suraj_Engineering_Pvt._Ltd. | Thane | +91979258675 |     116 |
|    6 |      506 | ABB_Pvt._Ltd. | Mumbai | +91959258375 |     113 |
|    7 |      507 | ACC_Pvt._Ltd. | Pune | +91999258676 |     116 |
|    9 |      509 | KC_Engineering_Pvt._Ltd. | Thane | +91979258635 |     109 |
+-----+-----+-----+-----+-----+-----+
6 rows in set (0.001 sec)
```

```
MariaDB [sqlproject]> select * from clients where client_name like '%Electricals%';
+-----+-----+-----+-----+-----+-----+
| Sr_No | Client_Id | Client_Name | Client_Address | Client_Contact | Product_ID |
+-----+-----+-----+-----+-----+-----+
|   10 |      510 | Pragati_Electricals | Thane | +91959258673 |     118 |
|   11 |      511 | Aryan_Electricals | Dombivali | +91939258625 |     110 |
|   12 |      512 | Vinod_Electricals | Powai | +91989758673 |     120 |
+-----+-----+-----+-----+-----+-----+
3 rows in set (0.000 sec)
```

```
MariaDB [sqlproject]> select * from orders where order_date like '___10%';
+-----+-----+-----+-----+-----+-----+-----+-----+
| Sr_No | Order_Id | Order_Date | Order_Product_Name | Order_Product_Detailas | order_product_qty | Order_Product_Price | Product_Delivery_Address | Product_ID |
+-----+-----+-----+-----+-----+-----+-----+-----+
|    2 |    1002 | 2022-10-15 | MCCB | 63A_MCCB | 150Nos | 150000 | Bandra |     107 |
|    5 |    1005 | 2022-10-01 | OCB | 1000A_OCB | 5Nos | 600000 | Airoli |     105 |
|    6 |    1006 | 2022-10-06 | Transformer | 500KVA_Transformer | 7Nos | 800000 | Thane |     101 |
|   10 |    1010 | 2022-10-04 | EARTHING_ROD | 6Mtr_CU_Earthing_Rod | 20Nos | 400000 | Dombivali |     110 |
+-----+-----+-----+-----+-----+-----+-----+-----+
4 rows in set (0.001 sec)
```

14.Union

```
MariaDB [sqlproject]> select clients.client_name as Non_Entities, clients.product_id as product_id from clients union select orders.order_product_name as Non_Entities, orders.product_id from orders;
```

Non_Entities	product_id
Harsh_Engineering_Pvt._Ltd.	107
Tejas_Engineering_Pvt._Ltd.	112
Suraj_Engineering_Pvt._Ltd.	116
Rave_Design_LLP	104
Jackson	103
ABB_Pvt._Ltd.	113
ACC_Pvt._Ltd.	116
Bharat_Bijlee	102
KC_Engineering_Pvt._Ltd.	109
Pragati_Electricals	118
Aryan_Electricals	110
Vinod_Electricals	120
CAD_Solution	114
Volt=Amp	101
Siemens	105
75Sqm Cables	109
63A MCCB	107
100W LED Lights	112
50mm CU Busbar	116
1000A OCB	105
500KVA Transformer	101
25mm PVC Conduit	120
12kay TPN DB	114
400KVA DG	103
60Mtr CU Earthing Rod	110
8Module Switch_Socket	116
4Module_Switch_Socket	116

```
27 rows in set (0.001 sec)
```

```
ERROR 1054 (42S22): Unknown column 'orders.product_name' in 'field list'
MariaDB [sqlproject]> select orders.order_product_name as Non_Entities, orders.product_id as product_id from orders union select transport.customer_name,transport.product_id from transport;
```

Non_Entities	product_id
CABLES	109
MCCB	107
LED_LIGHTS	112
BUSBAR	116
OCB	105
Transformer	101
CONDUIT	120
DB	114
DG	103
EARTHING_ROD	110
SWITCH_SOCKET	116
KC_Engineering_Pvt.	109
Harsh_Engineering_Pv	107
Tejas_Engineering_Pv	112
Volt=Amp	101
Suraj_Engineering_Pv	116
Aryan_Electricals	110

```
17 rows in set (0.001 sec)
```

15.Joins

Query: select Products.Product_ID, Clients.Client_ID, Products.Product_Name,Products.Product_Detailas from Products left join Clients on Products.Product_ID=Clients.Product_ID;

Product_ID	Client_ID	Product_Name	Product_Details
101	514	Transformer	Transformer_250KVA
102	508	Motor	Motor_5HP_upto_200HP
103	505	DG	DG_50KVA_upto_1MVA
104	504	VCB	VCB_600A_upto_2500A
105	515	OCB	OCB_100A_upto_1200A
106	NULL	LT_PANELS	LT_Panels_as_per_requirement
107	501	MCCB	MCCB_80A_upto_250A
108	NULL	MCB	MCB_4A_upto_80A
109	509	CABLES	CABLES_2.5Sqmm_upto_600Sqmm
110	511	EARTHING_ROD	EARTHING_ROD_3MTR_&_6MTR
111	NULL	LUGS	LUGS_2.5Sqmm_upto_600Sqmm
112	502	LED_LIGHTS	LED_LIGHTS_6W_upto_250W
113	506	BUSBAR	BUSBAR_as_per_requirement
114	513	DB	DBS_4-Way_upto_16Way
115	NULL	ISOLATOR	ISOLATOR_6A_upto_63A
116	503	SWITCH_SOCKET	SWITCH_SOCKET_2Module_upto_16Module
116	507	SWITCH_SOCKET	SWITCH_SOCKET_2Module_upto_16Module
117	NULL	SMOKE_DETECTOR	SOMKE_DETECTOR_as_per_requirement
118	510	CABLE_TRAY	CABLE_TRAY
119	NULL	STREET_LIGHT	STREET_LIGHT_60W_upto_200W
120	512	CONDUIT	CONDUIT

16.Subquery

1. Show product name whose ordered price is less than 500000:

Query: select Product_Name from Products where Product_ID = any (select Product_ID from Orders where Order_Product_Price > 500000);

Product_Name
OCB
Transformer
DG
3 rows in set (0.01 sec)

2. Show customer name and delivery status of product:

Query: select Customer_Name, Delivery_Status from Transport
where Customer_Address in (select Customer_Address
from Transport where Customer_Name
in('KC_Engineering_Pvt._Ltd.', 'Aryan_Electricals'));

Customer_Name	Delivery_Status
KC_Engineering_Pvt._Ltd.	Deliverd
Volt-Amp	In_Transit
Suraj_Engineering_Pvt._Ltd.	Deliverd
Aryan_Electricals	OrderNot_Placed

4 rows in set (0.00 sec)

3. Show product price less

than 300000: Query:

Ordered_Client_Name	Ordered_ID	Ordered_Date	Product_Delivery_Address	Product_ID	Ordered_Product_Price
KC_Engineering_Pvt._Ltd.	1001	2022-08-30	Thane	109	200000
Harsh_Engineering_Pvt._Ltd.	1002	2022-10-15	Bandra	107	150000
Tejas_Engineering_Pvt._Ltd.	1003	2022-09-11	Andheri	112	80000
Suraj_Engineering_Pvt._Ltd.	1011	2022-07-25	Thane	116	50000
ACC_Pvt._Ltd.	1012	2022-09-10	Pune	116	10000

5 rows in set (0.00 sec)

17.Views

1. Create a table for Products and Clients associated with Manages:

Query: create view manages as select Products.Product_Name, Products.Product_Details, Products.Product_Price, Products.Product_Status,Clients.Client_Name, Clients.Client_Address from Products, Clients where Products.Product_ID=Clients.Product_ID;

Product_Name	Product_Details	Product_Price	Product_Status	Client_Name	Client_Address
MCCB	MCCB_80A_upto_250A	15500	Available	Harsh_Engineering_Pvt._Ltd.	Bandra
LED_LIGHTS	LED_LIGHTS_6W_upto_250W	20000	Available	Tejas_Engineering_Pvt._Ltd.	Andheri
SWITCH_SOCKET	SWITCH_SOCKET_2Module_upto_16Module	900	Available	Suraj_Engineering_Pvt._Ltd.	Thane
VCB	VCB_600A_upto_2500A	100000	Available	Rave_Design_LL	Andheri
DG	DG_50KVA_upto_1MVA	400000	Available	Jackson	Delhi
BUSBAR	BUSBAR_as_per_requirement	25000	Not_Available	ABB_Pvt._Ltd.	Mumbai
SWITCH_SOCKET	SWITCH_SOCKET_2Module_upto_16Module	900	Available	ACC_Pvt._Ltd.	Pune
Motor	Motor_5HP_upto_200HP	200000	Available	Bharat_Bijlee	Navi_Mumbai
CABLES	CABLES_2.55sqmm_upto_600Sqmm	400000	Available	KC_Engineering_Pvt._Ltd.	Thane
CABLE_TRAY	CABLE_TRAY	0	Not_Available	Pragati_Electricals	Thane
EARTHING_ROD	EARTHING_ROD_3MTR_&_6MTR	30000	Not_Available	Aryan_Electricals	Dombivali
CONDUIT	CONDUIT	0	Not_Available	Vinod_Electricals	Powai
DB	DBS_4-Way_upto_16Way	7500	Available	CAD_Solution	Mumbai
Transformer	Transformer_250KVA	300000	Available	Volt=Amp	Thane
OCB	OCB_100A_upto_1200A	80000	Not_Available	Siemens	Airoli

- 2.Create a table for Orders and Transport associated with Order_Summary:

Query:create view Order_Summary as select Orders.Order_Product_Name, Orders.Ordered_ID, Orders.Ordered_Date, Transport.Transport_ID,Transport.Customer_Contact from Orders, Transport where Orders.Product_ID=Transport.Product_ID;

Order_product_Name	order_id	order_date	transport_id	customer_contact
CABLES	1001	2022-08-30	901	+91979258635
MCCB	1002	2022-10-15	902	+91989258675
LED_LIGHTS	1003	2022-09-11	903	+91999258675
Transformer	1006	2022-10-06	904	+91989258275
BUSBAR	1004	2022-08-15	905	+91979258675
SWITCH_SOCKET	1011	2022-07-25	905	+91979258675
SWITCH_SOCKET	1012	2022-09-10	905	+91979258675
EARTHING_ROD	1010	2022-10-04	907	+91939258625

THANKYOU