Practical Assignment -1

Q-1 Create following tables and perform queries:

Customer
CUST_ID **CUST_FNAME** **CUST_LNAME** **CUST_CITY** **CUST_DOB**

Order
ORD_ID **ORD_DATE** **CUST_ID** **TOT_AMT DUE**

```
create database rdbms;

use rdbms;

create table customer(
cust_id int primary key,
cust_fname varchar(20),
cust_lname varchar(20),
cust_city varchar(20),
cust_dob date);

create table orders(
ord_id int primary key,
cust_id int,
ord_date date,
tot_amt decimal(10,2),
due decimal(10,2),
```

foreign key(cust_id) references customer(cust_id));

desc customer;

Field	Type	Null	Key	Default	Extra
cust_id	int	NO	PRI	NULL	
cust_fname	varchar(20)	YES		NULL	
cust_lname	varchar(20)	YES		NULL	
cust_city	varchar(20)	YES		NULL	
cust_dob	date	YES		NULL	

desc orders;

Field	Type	Null	Key	Default	Extra
ord_id	int	NO	PRI	NULL	
cust_id	int	YES	MUL	NULL	
ord_date	date	YES		NULL	
tot_amt	decimal(10,2)	YES		NULL	
due	decimal(10,2)	YES		NULL	

```
insert into customer values(1,'Priya','Shah','Ahmedabad','2000-05-12');
insert into customer values(2, 'Sparsh', 'Patel', 'Surat', '1985-11-12');
insert into customer values(3, 'Parth', 'Mehta', 'Baroda', '1972-07-19');
insert into customer values(4, 'Shreya', 'Shah', 'Surat', '1990-02-05');
insert into customer values(5, 'Neha', 'Shah', 'Jamnagar', '1965-08-08');
insert into customer values(6, 'Raj', 'Desai', 'Ahmedabad', '1980-10-30');
insert into customer values(7, 'Meet', 'Patel', 'Pune', '2001-11-20');
insert into customer values(8, 'Payal', 'Patel', 'Gandhinagar', '1969-07-12');
insert into customer values(9, 'Om', 'Shah', 'Ahmedabad', '1999-03-02');
insert into customer values(10, 'Stuti', 'Ajmera', 'Ahmedabad', '2003-08-11');
```

```
select * from customer;
```

cust_id	cust_fname	cust_lname	cust_city	cust_dob
1	Priya	Shah	Ahmedabad	2000-05-12
2	Sparsh	Patel	Surat	1985-11-12
3	Parth	Mehta	Baroda	1972-07-19
4	Shreya	Shah	Surat	1990-02-05
5	Neha	Shah	Jamnagar	1965-08-08
6	Raj	Desai	Ahmedabad	1980-10-30
7	Meet	Patel	Pune	2001-11-20
8	Payal	Patel	Gandhinagar	1969-07-12
9	Om	Shah	Ahmedabad	1999-03-02
10	Stuti	Ajmera	Ahmedabad	2003-08-11

```
insert into orders values(101, 1, '2023-08-01', 60000, 10000);
insert into orders values(102, 2, '2023-08-15', 45000, 0);
insert into orders values(103, 3, '2023-09-01', 7500, 7500);
insert into orders values(104, 4, '2023-10-20', 100000, 20000);
insert into orders values(105, 5, '2023-06-05', 12000, 0);
insert into orders values(106, 6, '2023-07-25', 95000, 30000);
insert into orders values(107, 1, '2023-11-01', 5000, 0);
insert into orders values(108, 2, '2023-10-10', 55000, 55000);
insert into orders values(109, 3, '2023-09-15', 25000, 0);
insert into orders values(110, 5, '2023-10-01', 120000, 0);
insert into orders values(111, 7, '2015-02-08', 150000, 1000);
insert into orders values(112, 5, '2012-06-21', 20000, 0);
insert into orders values(113, 8, '2021-09-15', 85000, 5000);
insert into orders values(114, 9, '2010-11-11', 4000, 0);
insert into orders values(115, 10, '2022-09-30', 110000, 0);
```

```
select * from orders;
```

ord_id	cust_id	ord_date	tot_amt	due
101	1	2023-08-01	60000.00	10000.00
102	2	2023-08-15	45000.00	0.00
103	3	2023-09-01	7500.00	7500.00
104	4	2023-10-20	100000.00	20000.00
105	5	2023-06-05	12000.00	0.00
106	6	2023-07-25	95000.00	30000.00
107	1	2023-11-01	5000.00	0.00
108	2	2023-10-10	55000.00	55000.00
109	3	2023-09-15	25000.00	0.00

110	5	2023-10-01	120000.00	0.00
111	7	2015-02-08	150000.00	1000.00
112	5	2012-06-21	20000.00	0.00
113	8	2021-09-15	85000.00	5000.00
114	9	2010-11-11	4000.00	0.00
115	10	2022-09-30	110000.00	0.00

Queries:

1) Display all customers whose last name is SHAH.

select * from customer where cust_lname='Shah';

cust_id	cust_fname	cust_lname	cust_city	cust_dob
1	Priya	Shah	Ahmedabad	2000-05-12
4	Shreya	Shah	Surat	1990-02-05
5	Neha	Shah	Jamnagar	1965-08-08
9	Om	Shah	Ahmedabad	1999-03-02

2) Display order details for customers whose name starts with P.

```
select o.*
from orders o
join customer c ON o.cust_id = c.cust_id
where c.cust_fname LIKE 'P%';
```

ord_id	cust_id	ord_date	tot_amt	due
101	1	2023-08-01	60000.00	10000.00
107	1	2023-11-01	5000.00	0.00
103	3	2023-09-01	7500.00	7500.00
109	3	2023-09-15	25000.00	0.00
113	8	2021-09-15	85000.00	5000.00

3) Display all customers with their placed orders who stay in city SURAT.

```
select c.*, o.*
from customer c
left join orders o on c.cust_id = o.cust_id
where c.cust_city = 'Surat';
```

cust_id	cust_fname	cust_lname	cust_city	cust_dob	ord_id	cust_id	ord_date	tot_amt	due
2	Sparsh	Patel	Surat	1985-11-12	102	2	2023-08-15	45000.00	0.00
2	Sparsh	Patel	Surat	1985-11-12	108	2	2023-10-10	55000.00	55000.00
4	Shreya	Shah	Surat	1990-02-05	104	4	2023-10-20	100000.00	20000.00

4) Print all customers who have placed order more than 50000 rs.

```
select distinct c.*
from customer c
join orders o on c.cust_id = o.cust_id
where o.tot_amt > 50000;
```

cust_id	cust_fname	cust_lname	cust_city	cust_dob
1	Priya	Shah	Ahmedabad	2000-05-12
4	Shreya	Shah	Surat	1990-02-05
6	Raj	Desai	Ahmedabad	1980-10-30
2	Sparsh	Patel	Surat	1985-11-12
5	Neha	Shah	Jamnagar	1965-08-08
7	Meet	Patel	Pune	2001-11-20
8	Payal	Patel	Gandhinagar	1969-07-12
10	Stuti	Ajmera	Ahmedabad	2003-08-11

5) Find all orders which are left with payment due.

select * from orders where due > 0;

ord_id	cust_id	ord_date	tot_amt	due
101	1	2023-08-01	60000.00	10000.00
103	3	2023-09-01	7500.00	7500.00
104	4	2023-10-20	100000.00	20000.00
106	6	2023-07-25	95000.00	30000.00
108	2	2023-10-10	55000.00	55000.00
111	7	2015-02-08	150000.00	1000.00
113	8	2021-09-15	85000.00	5000.00

6) List all customers who have paid their dues.

```
select  distinct c.*
from customer c
join orders o ON c.cust_id = o.cust_id
where o.due = 0;
```

cust_id	cust_fname	cust_lname	cust_city	cust_dob
2	Sparsh	Patel	Surat	1985-11-12
5	Neha	Shah	Jamnagar	1965-08-08
1	Priya	Shah	Ahmedabad	2000-05-12
3	Parth	Mehta	Baroda	1972-07-19
9	Om	Shah	Ahmedabad	1999-03-02
10	Stuti	Ajmera	Ahmedabad	2003-08-11

7) Display all orders which are placed by the customers who stay in AHMEDABAD.

```
select o.*
from orders o
join customer c ON o.cust_id = c.cust_id
where c.cust_city = 'Ahmedabad';
```

ord_id	cust_id	ord_date	tot_amt	due
101	1	2023-08-01	60000.00	10000.00
107	1	2023-11-01	5000.00	0.00
106	6	2023-07-25	95000.00	30000.00
114	9	2010-11-11	4000.00	0.00
115	10	2022-09-30	110000.00	0.00

8) List out all customer whose order amount is due and live in BARODA.

```
select distinct c.*
from customer c
join orders o ON c.cust_id = o.cust_id
where o.due > 0 and c.cust_city = 'Baroda';
```

cust_id	cust_fname	cust_lname	cust_city	cust_dob
3	Parth	Mehta	Baroda	1972-07-19

9) Display all customers who have ordered between 5000 and 10000 rs.

```
select distinct c.*
from customer c
join orders o ON c.cust_id = o.cust_id
where o.tot_amt between 5000 and 10000;
```

cust_id	cust_fname	cust_lname	cust_city	cust_dob
3	Parth	Mehta	Baroda	1972-07-19
1	Priya	Shah	Ahmedabad	2000-05-12

10) List all customers who haven't placed order less than 1 lakh rs.

```
select distinct c.*
from customer c
where not  exists (
   select 1
   from orders o
   where o.cust_id = c.cust_id AND o.tot_amt < 100000
);
```

cust_id	cust_fname	cust_lname	cust_city	cust_dob
4	Shreya	Shah	Surat	1990-02-05
7	Meet	Patel	Pune	2001-11-20
10	Stuti	Ajmera	Ahmedabad	2003-08-11

Date Manipulations:

11)Display all customers who were born before the year 1970.

select * from customer where cust_dob<'1970-01-01';

cust_id	cust_fname	cust_lname	cust_city	cust_dob
5	Neha	Shah	Jamnagar	1965-08-08
8	Payal	Patel	Gandhinagar	1969-07-12

12) List out all customers who have birthday in this month.

select * from customer where month(cust_dob) = month(current_date);

cust_id	cust_fname	cust_lname	cust_city	cust_dob
2	Sparsh	Patel	Surat	1985-11-12
7	Meet	Patel	Pune	2001-11-20

13) Display all those orders which are placed in 2015 with date format DD/Month/YYYY.

select ord_id, DATE_FORMAT(ord_date, '%d/%M/%Y') AS Formatted_Date from orders where YEAR(ord_date) = 2015;

ord_id	Formatted_Date
111	08/February/2015

14) If credit days are 60 days then find out the due date for each order.

select ord_id, DATE_ADD(ord_date, INTERVAL 60 DAY) as Due_Date from orders;

ord_id	Due_Date
101	2023-09-30
102	2023-10-14
103	2023-10-31
104	2023-12-19
105	2023-08-04
106	2023-09-23
107	2023-12-31
108	2023-12-09
109	2023-11-14
110	2023-11-30
111	2015-04-09
112	2012-08-20
113	2021-11-14
114	2011-01-10
115	2022-11-29

15) Display the customer with their respective age.

```
select cust_id, cust_fname, cust_lname,
      FLOOR(DATEDIFF(CURRENT_DATE, CUST_DOB) / 365) as Age
from customer;
```

cust_id	cust_fname	cust_lname	Age
1	Priya	Shah	24
2	Sparsh	Patel	39
3	Parth	Mehta	52
4	Shreya	Shah	34
5	Neha	Shah	59
6	Raj	Desai	44
7	Meet	Patel	23
8	Payal	Patel	55
9	Om	Shah	25
10	Stuti	Ajmera	21

Clauses:

16) Find out the total customers from JAMNAGAR.

select COUNT(*) as Total_Customers from customer where cust_city = 'Jamnagar';

Total_Customers
1

17) Find out the minimum order given by customer read by user.

```
select MIN(tot_amt) as Minimum_Order
from orders
where cust_id =8 ;
```

Minimum_Order
85000.00

18) Find out the maximum number of orders given by any customer.

```
select cust_id, COUNT(*) AS Order_Count
from orders
group by cust_id
order by  Order_Count desc
LIMIT 1;
```

cust_id	Order_Count
5	3

19) Calculate the average amount for each customer.

```
select cust_id, AVG(tot_amt) as Average_Amount
from orders
group by cust_id;
```

cust_id	Average_Amount
1	32500.000000
2	50000.000000
3	16250.000000
4	100000.000000
5	50666.666667
6	95000.000000
7	150000.000000
8	85000.000000
9	4000.000000
10	110000.000000

20) Find out the total number of orders placed in year 2013.

```
select COUNT(*) as Total_Orders
from orders
where YEAR(ord_date) = 2013;
```

Total_Orders
0

PRACTICAL ASSIGNMENT - 2

Q1. Create tables STUDENT and COURSE with given column names and data types using mentioned size and constraints. Write down the SQL statements to create table and insert records. Display results for following queries:

STUDENT	COURSE
stud_id int(5) PK, fname varchar (15) NOT NULL, lname varchar (15), city varchar (15), crs_id int(5) FK	crs_id int(5) PK, crs_nm varchar (15) NOT NULL, duration int(2) NOT NULL

```
create table courses(
crs_id int(5) primary key,
crs_nm varchar(15) NOT NULL,
duration int(2) NOT NULL);
```

```
desc courses;
```

Field	Type	Null	Key	Default	Extra
crs_id	int	NO	PRI	NULL	
crs_nm	varchar(15)	NO		NULL	
duration	int	NO		NULL	

```
create table students(
```

```
stud_id int(5) primary key,
fname varchar(15) NOT NULL,
lname varchar(15),
city varchar(15),
crs_id int(5),
foreign key (crs_id) references courses(crs_id));
```

desc students;

Field	Type	Null	Key	Default	Extra
stud_id	int	NO	PRI	NULL	
fname	varchar(15)	NO		NULL	
lname	varchar(15)	YES		NULL	
city	varchar(15)	YES		NULL	
crs_id	int	YES	MUL	NULL	

```
insert into courses values(101,'PGDCSA',12);
insert into courses values(102, 'MTech', 24);
insert into courses values(103, 'BCA', 36);
insert into courses values(104, 'MCA',24);
insert into courses values(105, 'Msc', 24);
```

select * from courses;

crs_id	crs_nm	duration

101	PGDCSA	12
102	MTech	24
103	BCA	36
104	MCA	24
105	Msc	24

```
insert into students values(1, 'Parth', 'Sharma', 'SURAT', 101);
insert into students values(2, 'Rahul', 'Mehta', 'Mumbai', 102);
insert into students values(3, 'Priyanshi', 'Patel', 'Pune',103);
insert into students values(4, 'Mohak', 'Joshi', 'Delhi', 104);
insert into students values(5, 'Nisha', 'Shah', 'Jamnagar', 102);
insert into students values(6, 'Dev', 'Shah','Ahmedabad',105);
insert into students values(7, 'Devanshi', 'Patel','Ahmedabad',105);
insert into students values(8, 'Stuti', 'Shah','Rajkot',101);
insert into students values(9, 'Daivam', 'Shah','Surat',103);
select * from students;
```

stud_id	fname	lname	city	crs_id
1	Parth	Sharma	SURAT	101
2	Rahul	Mehta	Mumbai	102
3	Priyanshi	Patel	Pune	103
4	Mohak	Joshi	Delhi	104
5	Nisha	Shah	Jamnagar	102
6	Dev	Shah	Ahmedabad	105
7	Devanshi	Patel	Ahmedabad	105

8	Stuti	Shah	Rajkot	101
9	Daivam	Shah	Surat	103

1) Display detail of students from city SURAT.

select * from students where city='Surat';

stud_id	fname	lname	city	crs_id
1	Parth	Sharma	SURAT	101
9	Daivam	Shah	Surat	103

2) List down all courses and their duration.

select crs_nm,duration from courses;

crs_nm	duration
PGDCSA	1
MTech	2
BCA	3
MCA	2
Msc	2

3) Display details of those students whose first name starts with ‘P’.

select * from students where fname like 'P%';

stud_id	fname	lname	city	crs_id
1	Parth	Sharma	SURAT	101
3	Priyanshi	Patel	Pune	103

4) Display list of students who opted for BCA course.

```
select fname, lname from students
join courses on students .crs_id = courses.crs_id
where courses.crs_nm = 'BCA';
```

fname	lname
Priyanshi	Patel
Daivam	Shah

5) Display full name of students and city they belong to.

select concat(fname,' ',lname) as full_name,city from students;

full_name	city
Parth Sharma	SURAT
Rahul Mehta	Mumbai
Priyanshi Patel	Pune
Mohak Joshi	Delhi
Nisha Shah	Jamnagar
Dev Shah	Ahmedabad
Devanshi Patel	Ahmedabad
Stuti Shah	Rajkot
Daivam Shah	Surat

6) Display courses having duration more than 10 months.

select crs_nm, duration from courses where duration > 10;

crs_nm	duration
PGDCSA	12
MTech	24
BCA	36
MCA	24
Msc	24

7) Display student id as ROLLNO along with other details.

select stud_id as rollno,fname,lname,city,crs_id from students;

rollno	fname	lname	city	crs_id
1	Parth	Sharma	SURAT	101
2	Rahul	Mehta	Mumbai	102
3	Priyanshi	Patel	Pune	103
4	Mohak	Joshi	Delhi	104
5	Nisha	Shah	Jamnagar	102
6	Dev	Shah	Ahmedabad	105
7	Devanshi	Patel	Ahmedabad	105
8	Stuti	Shah	Rajkot	101
9	Daivam	Shah	Surat	103

8) Display student name, course name and their city.

select fname, lname, crs_nm, city from students join courses on students.crs_id = courses.crs_id;

fname	lname	crs_nm	city
Parth	Sharma	PGDCSA	SURAT
Stuti	Shah	PGDCSA	Rajkot
Rahul	Mehta	MTech	Mumbai
Nisha	Shah	MTech	Jamnagar
Priyanshi	Patel	BCA	Pune
Daivam	Shah	BCA	Surat
Mohak	Joshi	MCA	Delhi
Dev	Shah	Msc	Ahmedabad
Devanshi	Patel	Msc	Ahmedabad

9) Display total number of students from course MTech.

```
select COUNT(*) as total_students from students
join courses on students.crs_id = courses.crs_id
where courses.crs_nm = 'MTech';
```

total_students
2

10) Calculate student percentage and display as Result.

Q-2 Create table EMPLOYEE and DESIGNATION with given column names and data using mentioned size and constraints. Write down the SQL statements to create table and insert records. Display results for following queries:

EMPLOYEE	DESIGNATION
emp_id int(5) PK, ename varchar (25) NOT NULL, dob date, city varchar (12), designation int(2) FK,	desg_id int(5) PK, desg_nm varchar (15) NOT NULL Basic_salary float(8,2)

```
create table designation(
desg_id int(5) primary key,
desg_nm varchar(15) not null,
basic_salary decimal(8,2));

desc designation;
```

Field	Type	Null	Key	Default	Extra
desg_id	int	NO	PRI	NULL	
desg_nm	varchar(15)	NO		NULL	
basic_salary	decimal(8,2)	YES		NULL	

```
create table employee(
emp_id int(5) primary key,
ename varchar(15) not null,
dob date,
city varchar(12),
designation int(5),
foreign key(designation) references designation(desg_id));

desc employee;
```

Field	Type	Null	Key	Default	Extra
emp_id	int	NO	PRI	NULL	
ename	varchar(15)	NO		NULL	
dob	date	YES		NULL	
city	varchar(12)	YES		NULL	
designation	int	YES	MUL	NULL	

```
insert into designation values(1,'Manager',90000);
insert into designation values(2,'Analyst',60000);
insert into designation values(3,'HR',55000);
insert into designation values(4,'Developer',70000);
insert into designation values(5,'Sales',55000);
select * from designation;
```

desg_id	desg_nm	basic_salary
1	Manager	90000.00
2	Analyst	60000.00
3	HR	55000.00
4	Developer	70000.00
5	Sales	55000.00

```
insert into employee values(101,'Aisha','1990-06-12','Ahmedabad',1);
insert into employee values(102,'Pari','1999-01-10','Surat',2);
insert into employee values(103,'Om','2000-11-01','Ahmedabad',3);
insert into employee values(104,'Disha','1997-03-22','Delhi',4);
insert into employee values(105,'Jiten','2003-08-11','Pune',5);
insert into employee values(106,'Diya','2002-01-04','Mumbai',2);
insert into employee values(107,'Rishi','2001-01-21','Gandhinagar',3);
insert into employee values(108,'Jay','2002-10-09','Delhi',1,'Sales');
select * from employee;
```

emp_id	ename	dob	city	designation	
101	Aisha	1990-06-12	Ahmedabad	1	
102	Pari	1999-01-10	Surat	2	
103	Om	2000-11-01	Ahmedabad	3	
104	Disha	1997-03-22	Delhi	4	
105	Jiten	2003-08-11	Pune	5	
106	Diya	2002-01-04	Mumbai	2	
107	Rishi	2001-01-21	Gandhinagar	3	
108	Jay	2002-10-09	Delhi	1	

1) Display details of employee(s) from AHMEDABAD city.

select * from employee where city='Ahmedabad';

emp_id	ename	dob	city	designation
101	Aisha	1990-06-12	Ahmedabad	1
103	Om	2000-11-01	Ahmedabad	3

2) Display employee(s) name and their salary.

```
select employee.ename, designation.basic_salary
from employee
join designation ON employee.designation = designation.desg_id;
```

ename	basic_salary
Aisha	90000.00
Jay	90000.00
Pari	60000.00
Diya	60000.00
Om	55000.00
Rishi	55000.00
Disha	70000.00
Jiten	55000.00

3) Add new columns DEPARTMENT to EMPLOYEE table to store department name.

alter table employee add column Department varchar(20);
desc employee;

Field	Type	Null	Key	Default	Extra
emp_id	int	NO	PRI	NULL	
ename	varchar(15)	NO		NULL	
dob	date	YES		NULL	
city	varchar(12)	YES		NULL	
designation	int	YES	MUL	NULL	
Department	varchar(20)	YES		NULL	

4) Display employee detail along with newly added column Department data.

```
UPDATE employee
SET Department = CASE
   WHEN designation = 1 THEN 'Management'
   WHEN designation = 4 THEN 'Developer'
   WHEN designation = 2 THEN 'Analyst'
   WHEN designation = 5 THEN 'Sales'
   WHEN designation = 3 THEN 'HR'
END;

select * from employee;
```

emp_id	ename	dob	city	designation	Department
101	Aisha	1990-06-12	Ahmedabad	1	Management
102	Pari	1999-01-10	Surat	2	Analyst
103	Om	2000-11-01	Ahmedabad	3	HR
104	Disha	1997-03-22	Delhi	4	Developer
105	Jiten	2003-08-11	Pune	5	Sales
106	Diya	2002-01-04	Mumbai	2	Analyst
107	Rishi	2001-01-21	Gandhinagar	3	HR
108	Jay	2002-10-09	Delhi	1	Sales

5) Display all designation data and its basic salary.

select * from designation;

desg_id	desg_nm	basic_salary
1	Manager	90000.00
2	Analyst	60000.00
3	HR	55000.00
4	Developer	70000.00
5	Sales	55000.00

6) Display employee(s) name, age along with their designation.

```
select employee.ename, FLOOR(DATEDIFF(CURDATE(), dob) / 365) as age,
 Designation.desg_nm from employee join designation on employee.designation
= designation.desg_id;
```

ename	age	desg_nm
Aisha	34	Manager
Jay	22	Manager
Pari	25	Analyst
Diya	22	Analyst
Om	24	HR
Rishi	23	HR
Disha	27	Developer
Jiten	21	Sales

7) Display employees from HR department.

select ename from employee where Department = 'HR';

ename
Om
Rishi

8) Display only those employees whose salary is higher than 80000.

```
select employee.ename
from employee
join designation ON employee.designation = designation.desg_id
where designation.basic_salary > 80000;
```

ename
Aisha
Jay

9) Display Manager(s) from SALES department.

```
select employee.ename
FROM employee
JOIN designation ON employee.designation = designation.desg_id
WHERE designation.desg_nm = 'Manager' AND employee.Department = 'Sales';
```

ename
Jay

10) Display employee(s) name, designation and their Basic salary.

```
SELECT employee.ename, designation.desg_nm, designation.basic_salary
FROM employee
JOIN designation ON employee.designation = designation.desg_id;
```

ename	desg_nm	basic_salary
Aisha	Manager	90000.00
Jay	Manager	90000.00
Pari	Analyst	60000.00
Diya	Analyst	60000.00
Om	HR	55000.00
Rishi	HR	55000.00
Disha	Developer	70000.00
Jiten	Sales	55000.00

Q-3 Create tables ORDER and PRODUCT with given column names and data using mentioned size and constraints. Write down the SQL statements to create table and insert records. Display results for following queries:

ORDER	PRODUCT
Ord_id int(5) PK, **Ord_dt Date,** **Cust_nm varchar (15) NOT NULL,** **Cust_city varchar (15) NOT NULL,** **prod_id int(5) FK,** **qty int(5,2)**	Prod_id int(5) PK, prod_nm varchar2 (15) NOT NULL, prod_rate float(7,2) NOT NULL

```
create table product (
   prod_id int(5) primary key,
   prod_nm varchar(15) not null,
   prod_rate decimal(7,2) not null
);
```

desc product;

Field	Type	Null	Key	Default	Extra
prod_id	int	NO	PRI	NULL	
prod_nm	varchar(15)	NO		NULL	
prod_rate	decimal(7,2)	NO		NULL	

```
CREATE TABLE ordertable (
   ord_id INT(5) PRIMARY KEY,
   ord_dt DATE,
   cust_nm varchar(15) not null,
   cust_city varchar(15) not null,
   prod_id int(5),
   qty decimal(5,2),
   foreign key (prod_id) references product(prod_id));

desc ordertable;
```

Field	Type	Null	Key	Default	Extra
ord_id	int	NO	PRI	NULL	
ord_dt	date	YES		NULL	
cust_nm	varchar(15)	NO		NULL	
cust_city	varchar(15)	NO		NULL	
prod_id	int	YES	MUL	NULL	
qty	decimal(5,2)	YES		NULL	

```
insert into product values(101,'Laptop',45000);
insert into product values(102, 'Mouse', 500);
insert into product values(103,'Keyboard',1500);
insert into product values(104,'Monitor',12000);
insert into product values(105,'Printer',8500);
select * from product;
```

prod_id	prod_nm	prod_rate
101	Laptop	45000.00
102	Mouse	500.00
103	Keyboard	1500.00
104	Monitor	12000.00
105	Printer	8500.00

```
insert into ordertable values(1, '2024-11-01', 'Jay', 'Mumbai', 101, 1);
insert into ordertable values(2, '2024-11-02', 'Dev', 'Delhi', 102, 2);
insert into ordertable values(3, '2024-11-03', 'Diya', 'Bhavnagar', 103, 3);
insert into ordertable values(4, '2024-11-04', 'Priya', 'Mumbai', 104, 2);
insert into ordertable values(5, '2024-11-05', 'Om', 'Bhavnagar', 105, 1);
select * from ordertable;
```

ord_id	ord_dt	cust_nm	cust_city	prod_id	qty
1	2024-11-01	Jay	Mumbai	101	1.00
2	2024-11-02	Dev	Delhi	102	2.00
3	2024-11-03	Diya	Bhavnagar	103	3.00
4	2024-11-04	Priya	Mumbai	104	2.00
5	2024-11-05	Om	Bhavnagar	105	1.00

1) Display details of products having price more than 1000 rs.

select * from product where prod_rate>1000;

prod_id	prod_nm	prod_rate
101	Laptop	45000.00
103	Keyboard	1500.00
104	Monitor	12000.00
105	Printer	8500.00

2) Display all customers and their city.

select cust_nm,cust_city from ordertable;

cust_nm	cust_city
Jay	Mumbai
Dev	Delhi
Diya	Bhavnagar
Priya	Mumbai
Om	Bhavnagar

3) Display customer name, their city, product name and its quantity.

```
select O.cust_nm, O.cust_city, P.prod_nm, O.qty
from ordertable O
join product P on O.prod_id = P.prod_id;
```

cust_nm	cust_city	prod_nm	qty
Jay	Mumbai	Laptop	1.00
Dev	Delhi	Mouse	2.00
Diya	Bhavnagar	Keyboard	3.00
Priya	Mumbai	Monitor	2.00
Om	Bhavnagar	Printer	1.00

4) Display Order date and amount under the each order.

```
select O.ord_dt, (O.qty * P.prod_rate) as Amount
from ordertable O
join product P ON O.prod_id = P.prod_id;
```

ord_dt	Amount
2024-11-01	45000.0000
2024-11-02	1000.0000
2024-11-03	4500.0000
2024-11-04	24000.0000
2024-11-05	8500.0000

5) Display customers from city BHAVNAGAR.

select cust_nm,cust_nm from ordertable where cust_city='Bhavnagar';

cust_nm	cust_nm
Diya	Diya
Om	Om

6) Display total number of customers from each city.

select cust_city, COUNT(Cust_nm) AS Total_Customers
from ordertable group by cust_city;

cust_city	Total_Customers
Mumbai	2
Delhi	1
Bhavnagar	2

7) Calculate total amount of order for each customer.

```
select cust_nm, SUM(O.Qty * P.Prod_rate) as Total_Amount
from ordertable O join product P ON O.prod_id = P.prod_id group by cust_nm;
```

cust_nm	Total_Amount
Jay	45000.0000
Dev	1000.0000
Diya	4500.0000
Priya	24000.0000
Om	8500.0000

8) Display maximum sale in each of the month.

```
select MONTH(ord_dt) AS Order_Month, MAX(O.qty * P.prod_rate) as Max_Sale
from ordertable O join product P ON O.prod_id = P.prod_id group  by
MONTH(ord_dt);
```

Order_Month	Max_Sale
11	45000.0000

9) Display customer name, product name, quantity and calculated amount.

```
select O.cust_nm, P.prod_nm, O.qty, (O.qty * P.prod_rate) AS Amount
from ordertable O join product P ON O.prod_id = P.prod_id;
```

cust_nm	prod_nm	qty	Amount
Jay	Laptop	1.00	45000.0000
Dev	Mouse	2.00	1000.0000
Diya	Keyboard	3.00	4500.0000
Priya	Monitor	2.00	24000.0000
Om	Printer	1.00	8500.0000

10) Display Order id, date, customer name, product name, quantity purchased under the order and total amount

select O.ord_id, O.ord_dt, O.cust_nm, P.prod_nm, O.qty, (O.qty * P.prod_rate) as Total_Amount from ordertable O join product P ON O.prod_id = P.prod_id;

ord_id	ord_dt	cust_nm	prod_nm	qty	Total_Amount
1	2024-11-01	Jay	Laptop	1.00	45000.0000
2	2024-11-02	Dev	Mouse	2.00	1000.0000
3	2024-11-03	Diya	Keyboard	3.00	4500.0000
4	2024-11-04	Priya	Monitor	2.00	24000.0000
5	2024-11-05	Om	Printer	1.00	8500.0000