Assignment - 1

Q-1 Create following tables and perform queries:

Order
ORD_ID
ORD_DATE
CUST_ID
TOT_AMT
DUE

Customer
CUST_ID
CUST_FNAME
CUST_LNAME
CUST_CITY
CUST_DOB

```
CREATE DATABASE ORDER_Customer_Assignment;
USE RDORDER_Customer_Assignment;
CREATE TABLE customer(
CUST_ID INT PRIMARY KEY,
CUST_FNAME VARCHAR(40),
CUST_LNAME VARCHAR(40),
CUST_CITY VARCHAR(30),
CUST_DOB DATE
);
CREATE TABLE ord(
ORD_ID INT PRIMARY KEY,
ORD_DATE DATE,
CUST_ID INT,
TOT_AMT INT,
DUE INT,
FOREIGN KEY(CUST_ID) references customer(CUST_ID)
);

INSERT INTO customer
(CUST_ID, CUST_FNAME, CUST_LNAME, CUST_CITY, CUST_DOB)
VALUES
(101, 'Payal' , 'Patel' , 'Ahmedabad' ,'1999-02-17'),
(102, 'Mina' , 'Kumari' , 'Bhuj' , '1999-04-05'),
(103, 'Viru' , 'Shah' , 'Surat' , '1999-06-07'),
(104, 'Ketan' , 'Shah' , 'Valsad' , '2004-06-22'),
(105, 'Manali' , 'Shah' , 'Vadodra' , '2015-07-03'),
(106, 'Priyanka' , 'Rathod' , 'Gnagar' , '2001-07-18'),
(107, 'Agna' , 'Horavi' , 'Mehsana' , '1964-08-02'),
(108, 'Divy' , 'Patel' , 'Junaghad' , '1996-09-02'),
(109, 'NIDHI' , 'Soni' , 'Patan' , '2000-10-22'),
(110, 'Kisha' , 'Varma' , 'Jamnagar' , '2002-11-02');
SELECT *FROM customer;
```

CUST_ID	CUST_FNAME	CUST_LNAME	CUST_CITY	CUST_DOB
101	Payal	Patel	Ahmedabad	17-02-1999
102	Mina	Kumari	Bhuj	05-04-

				1999
103	Viru	Shah	Surat	07-06-1999
104	Ketan	Shah	Valsad	22-06-2004
105	Manali	Shah	Vadodra	03-07-2005
106	Priyanka	Rathod	Gnagar	18-07-2001
107	Agna	Horavi	Mehsana	02-08-1964
108	Divy	Patel	Junaghad	02-09-1996
109	NIDHI	Soni	Patan	22-10-2000
110	Kisha	Varma	Jamnagar	02-11-2002

```
INSERT INTO ord
(ORD_ID, ORD_DATE, CUST_ID, TOT_AMT, DUE)
VALUES
(01, '2024-01-21' , 101 , 17000 , 0),
(02, '2023-03-14' , 102 , 4000 , 100),
(03, '2022-05-06' , 103 , 15000 , 0),
(04, '2023-06-11' , 104 , 45000 , 0),
(05, '2024-06-28' , 105 , 55000 , 3000),
(06, '2013-07-13' , 106 , 6000 , 200),
(07, '2023-07-23' , 107 , 4000 , 0),
(08, '2024-08-28' , 108 , 7000 , 0),
(09, '2013-09-20' , 109 , 8900 , 0),
(10, '2024-10-27' , 110 , 145000 , 20000);
SELECT *FROM ord;
```

ORD_ID	ORD_DATE	CUST_ID	TOT_AMT	DUE
1	21-01-2024	101	17000	0
2	14-03-2023	102	4000	100
3	06-05-2022	103	15000	0
4	11-06-2023	104	45000	0
5	28-06-2024	105	55000	3000
6	13-07-2023	106	6000	200
7	23-07-2023	107	4000	0

8	28-08-2024	108	7000	0
9	20-09-2023	109	8900	0
10	27-10-2024	110	145000	20000

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
103	Viru	Shah	Surat	07-06-1999
104	Ketan	Shah	Valsad	22-06-2004
105	Manali	Shah	Vadodra	03-07-2005

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

```
SELECT *
FROM ord
JOIN customer
ON ord.CUST_ID = customer.CUST_ID
WHERE customer.Cust_FNAME LIKE 'P%';
```

ORD_ID	ORD_DATE	CUST_ID	TOT_AMT	DUE	CUST_ID	CUST_FNAME	CUST_LNAME	CUST_CITY	CUST_DOB
1	21-01-2024	101	17000	0	101	Payal	Patel	Ahmedabad	17-02-1999
6	13-07-2023	106	6000	200	106	Priyanka	Rathod	Gnagar	18-07-2001

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

```
SELECT *
FROM customer
JOIN ord
ON customer.CUST_ID = ord.CUST_ID
```

```
WHERE customer.CUST_CITY = 'SURAT';
```

CUST_ID	CUST_FNAME	CUST_LNAME	CUST_CITY	CUST_DOB	ORD_ID	ORD_DATE	CUST_ID	TOT_AMT	DUE
103	Viru	Shah	Surat	#####	3	#####	103	15000	0

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

```
SELECT *
FROM customer
Join ord
ON customer.CUST_ID = ord.CUST_ID
WHERE ord.TOT_AMT > 50000;
```

CUST_ID	CUST_FNAME	CUST_LNAME	CUST_CITY	CUST_DOB	ORD_ID	ORD_DATE	CUST_ID	TOT_AMT	DUE
105	Manali	Shah	Vadodra	03-07-2005	5	28-06-2024	105	55000	3000
110	Kisha	Varma	Jamnagar	02-11-2002	10	27-10-2024	110	145000	20000

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

```
SELECT * FROM ord WHERE DUE>0;
```

ORD_ID	ORD_DATE	CUST_ID	TOT_AMT	DUE
2	14-03-2023	102	4000	100
5	28-06-2024	105	55000	3000
6	13-07-2023	106	6000	200
10	27-10-2024	110	145000	20000

6) List all customers who have paid their dues.

```
SELECT *
FROM customer
JOIN ord
ON customer.CUST_ID = ord.CUST_ID
WHERE ord.DUE = 0;
```

CUST_ID	CUST_FNAME	CUST_LNAME	CUST_CITY	CUST_DOB	ORD_ID	ORD_DATE	CUST_ID	TOT_AMT	DUE
101	Payal	Patel	Ahmedabad	17-02-1999	1	21-01-2024	101	17000	0
103	Viru	Shah	Sihi	07-06-1999	3	06-05-2022	103	15000	0
104	Ketan	Shah	Valsad	22-06-2004	4	11-06-2023	104	45000	0
107	Agna	Horavi	Mehsana	02-08-1964	7	23-07-2023	107	4000	0
108	Divy	Patel	Junagha d	02-09-1996	8	28-08-2024	108	7000	0
109	NIDHI	Soni	Patan	22-10-2000	9	20-09-2023	109	8900	0

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

```
SELECT *
FROM ord
JOIN customer
ON ord.CUST_ID = customer.CUST_ID
WHERE customer.CUST_CITY = 'AHMEDABAD';
```

ORD_ID	ORD_DATE	CUST_ID	TOT_AMT	DUE	CUST_ID	CUST_FNAME	CUST_LNAME	CUST_CITY	CUST_DOB
1	21-01-2024	101	17000	0	101	Payal	Patel	Ahmedabad	17-02-1999

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

```
SELECT *
FROM customer
JOIN ord
ON customer.CUST_ID = ord.CUST_ID
WHERE ord.DUE > 0 AND customer.CUST_CITY = 'BARODA';
```

CUST_ID	CUST_FNAME	CUST_LNAME	CUST_CITY	CUST_DOB	ORD_ID	ORD_DATE	CUST_ID	TOT_AMT	DUE
105	Manali	Shah	Vadodra	03-07-2005	5	28-06-2024	105	55000	3000

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

```
SELECT *
FROM customer
JOIN ord
ON customer.CUST_ID = ord.CUST_ID
WHERE ord.TOT_AMT BETWEEN 5000 AND 10000;
```

CUST_ID	CUST_FNAME	CUST_LNAME	CUST_CITY	CUST_DOB	ORD_ID	ORD_DATE	CUST_ID	TOT_AMT	DUE
106	Priyanka	Rathod	Gnagar	18-07-2001	6	13-07-2023	106	6000	200
108	Divy	Patel	Junagha d	02-09-1996	8	28-08-2024	108	7000	0
109	NIDHI	Soni	Patan	22-10-2000	9	20-09-2023	109	8900	0

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

```
SELECT *
FROM customer
WHERE CUST_ID NOT IN (SELECT CUST_ID FROM ord WHERE TOT_AMT <100000);
```

CUST_ID	CUST_FNAME	CUST_LNAME	CUST_CITY	CUST_DOB
110	Kisha	Varma	Jamnagar	02-11-2002

Date Manipulations:

11) Display all customers who have born before year 1970.

```
SELECT * FROM customer WHERE YEAR(CUST_DOB) < 1970;
```

CUST_ID	CUST_FNAME	CUST_LNAME	CUST_CITY	CUST_DOB
107	Agna	Horavi	Mehsana	02-08-1964

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

110	Kisha	Varma	Jamnagar	02-11-2002

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

```
SELECT *, DATE_FORMAT(ORD_DATE,'%D/%M/%Y') AS FormattedDate
FROM ord
WHERE YEAR(ORD_DATE)=2015;
```

ORD_ID	FormattedDate
3	6th/May/2015

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

```
SELECT *, DATE_ADD(ORD_DATE,INTERVAL 60 DAY) AS DueDate
FROM ord;
```

ORD_ID	ORD_DATE	CUST_ID	TOT_AMT	DUE	DueDate
1	21-01-2024	101	17000	0	21-03-2024
2	14-03-2023	102	4000	100	13-05-2023
3	06-05-2022	103	15000	0	05-07-2022
4	11-06-2023	104	45000	0	10-08-2023
5	28-06-2024	105	55000	3000	27-08-2024
6	13-07-2023	106	6000	200	11-09-2023
7	23-07-2023	107	4000	0	21-09-2023
8	28-08-2024	108	7000	0	27-10-2024
9	20-09-2023	109	8900	0	19-11-2023
10	27-10-2024	110	145000	20000	26-12-2024

15) Display the customer with their respective age.

```
SELECT *,TIMESTAMPDIFF(YEAR, CUST_DOB, CURRENT_DATE) AS Age
FROM customer;
```

CUST_ID	CUST_FNAME	CUST_LNAME	CUST_CITY	CUST_DOB	Age
101	Payal	Patel	Ahmedabad	17-02-	25

				1999	
102	Mina	Kumari	Bhuj	05-04-1999	25
103	Viru	Shah	Sihi	07-06-1999	25
104	Ketan	Shah	Valsad	22-06-2004	20
105	Manali	Shah	Vadodra	03-07-2005	19
106	Priyanka	Rathod	Gnagar	18-07-2001	23
107	Agna	Horavi	Mehsana	02-08-1964	60
108	Divy	Patel	Junaghad	02-09-1996	28
109	NIDHI	Soni	Patan	22-10-2000	24
110	Kisha	Varma	Jamnagar	02-11-2002	22

Clauses:

16) Find out the total customers from JAMNAGAR.

```
SELECT CUST_CITY, COUNT(*) AS TotalCustomers
FROM customer
WHERE CUST_CITY='JAMNAGAR';
```

CUST_CITY	TotalCustomers
Jamnagar	1

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

```
SELECT MIN(TOT_AMT) AS MinOrder
FROM ord;
```

MinOrder
4000

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

```
SELECT CUST_ID, COUNT(*) AS NumberOfOrders
FROM Ord
```

```
GROUP BY CUST_ID
ORDER BY NumberOfOrders;
```

CUST_ID	NumberOfOrders
101	1
102	1
103	1
104	1
105	1
106	1
107	1
108	1
109	1
110	1

19) Calculate the average amount for each customer.

```
SELECT CUST_ID, avg(TOT_AMT) AS AverageAmount
FROM ord
GROUP BY CUST_ID;
```

CUST_ID	AverageAmount
101	17000
102	4000
103	15000
104	45000
105	55000
106	6000
107	4000
108	7000
109	8900
110	145000

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

```
SELECT COUNT(*) AS OrdersIn2013
FROM ord
WHERE YEAR(ORD_DATE) = 2023;
```

OrdersIn2013
0

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
stud_id int(5) PK,
fname varchar (15) NOT NULL,
lname varchar (15),
city varchar (15),
crs_id int(5) FK
COURSE
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;

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;

1) Display detail of students from city SURAT.

stud_id	fname	lname	city	crs_id
1	Parth	Patel	SURAT	101
9	Dhruvil	Parmar	Surat	103

2) List down all courses and their duration.

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

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

stud_id	fname	lname	city	crs_id
1	Parth	Patel	SURAT	101
3	Priya	Patil	Pune	103

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

fname	lname
Priya	Patil
Dhruvil	Parmar

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

full_name	city
Parth Patel	SURAT
Rahi Mnhotra	Mumbai
Priya Patil	Pune
Mohan Jigo	Delhi
Neha Saho	Jamnagar
Diva Matiwala	Ahmedabad
Devi Patel	Ahmedabad
Sikha Shah	Rajkot
Dhruvil Parmar	Surat

6) Display courses having duration more than 10 months.

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

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

rollno	fname	lname	city	crs_id
1	Parth	Patel	SURAT	101
2	Rahi	Mnhotra	Mumbai	102
3	Priya	Patil	Pune	103
4	Mohan	Jigo	Delhi	104
5	Neha	Saho	Jamnagar	102
6	Diva	Matiwala	Ahmedabad	105
7	Devi	Patel	Ahmedabad	105
8	Sikha	Shah	Rajkot	101
9	Dhruvil	Parmar	Surat	103

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

fname	lname	crs_nm	city
Parth	Patel	PGDCSA	SURAT
Rahi	Mnhotra	MTech	Mumbai
Priya	Patil	BCA	Pune
Mohan	Jigo	MCA	Delhi
Neha	Saho	MTech	Jamnagar
Diva	Matiwala	Msc	Ahmedabad
Devi	Patel	Msc	Ahmedabad
Sikha	Shah	PGDCSA	Rajkot
Dhruvil	Parmar	BCA	Surat

9) Display total number of students from course 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
emp_id int(5) PK,
ename varchar (25) NOT NULL,
dob date,
city varchar (12),
designation int(2) FK,

DESIGNATION
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;
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;
```

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

emp_id	ename	dob	city	designation	Department
101	Aesha	12-06-1990	Ahmedabad	1	Management
103	Oesh	01-11-2000	Ahmedabad	3	HR

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

ename	basic_salary
Aesha	91000
Parul	61000
Oesh	59000
Divya	73000
Jignya	58000
Diyam	61000
Rushuta	59000

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

Field	Type	Null	Key	Default	Extra
emp_id	int(5)	NO	PRI	NULL	
ename	varchar(15)	NO		NULL	
dob	date	YES		NULL	
city	varchar(12)	YES		NULL	
designation	int(5)	YES	MUL	NULL	
Department	**varchar(20)**	**YES**		**NULL**	

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

emp_id	ename	dob	city	designation	Department
101	Aesha	12-06-1990	Ahmedabad	1	Management
102	Parul	10-01-1999	Surat	2	Analyst
103	Oesh	01-11-2000	Ahmedabad	3	HR
104	Divya	22-03-1997	Delhi	4	Developer
105	Jignya	11-08-2003	Pune	5	Sales
106	Diyam	04-01-2002	Mumbai	2	Analyst
107	Rushuta	21-01-	Gandhinagar	3	HR

		2001			

5) Display all designation data and its basic salary.

desg_id	desg_nm	basic_salary
1	Manager	91000
2	Analyst	61000
3	HR	59000
4	Developer	73000
5	Sales	58000

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

ename	age	desg_nm
Aesha	34	Manager
Parul	25	Analyst
Oesh	24	HR
Divya	27	Developer
Jignya	21	Sales
Diyam	22	Analyst
Rushuta	23	HR

7) Display employees from HR department.

ename
Oesh
Rushuta

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

ename
Aesha

9) Display Manager(s) from SALES department.

ename
Jaykumar

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

ename	desg_nm	basic_salary
Aesha	Manager	91000
Parul	Analyst	61000
Oesh	HR	59000
Divya	Developer	73000

Jignya	Sales	58000
Diyam	Analyst	61000
Rushuta	HR	59000
Jaykumar	Manager	91000

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
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)
PRODUCT
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;
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;

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

prod_id	prod_nm	prod_rate
101	Laptop	45000
103	Keyboard	1500
104	Monitor	12000
105	Printer	8500

2) Display all customers and their city.

cust_nm	cust_city
Jaykumar	Mumbai
Divyam	Delhi
Diyaben	Bhavnagar
Priyanka	Mumbai
Ovesh	Bhavnagar

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

cust_nm	cust_city	prod_nm	qty
Jaykumar	Mumbai	Laptop	1
Divyam	Delhi	Mouse	2
Diyaben	Bhavnagar	Keyboard	3
Priyanka	Mumbai	Monitor	2
Ovesh	Bhavnagar	Printer	1

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

ord_dt	Amount
01-11-2024	45000
02-11-2024	1000
03-11-2024	4500
04-11-2024	24000
05-11-	8500

2024	

5) Display customers from city BHAVNAGAR.

cust_nm	cust_nm
Diyaben	Diyaben
Ovesh	Ovesh

6) Display total number of customers from each city.

cust_city	Total_Customers
Bhavnagar	2
Delhi	1
Mumbai	2

7) Calculate total amount of order for each customer.

cust_nm	Total_Amount
Divyam	1000
Diyaben	4500
Jaykumar	45000
Ovesh	8500
Priyanka	24000

8) Display maximum sale in each of the month.

Order_Month	Max_Sale
11	45000

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

cust_nm	prod_nm	qty	Amount
Jaykumar	Laptop	1	45000
Divyam	Mouse	2	1000
Diyaben	Keyboard	3	4500
Priyanka	Monitor	2	24000
Ovesh	Printer	1	8500

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

ord_id	ord_dt	cust_nm	prod_nm	qty	Total_Amount
1	01-11-2024	Jaykumar	Laptop	1	45000
2	02-11-	Divyam	Mouse	2	1000

	2024				
3	03-11-2024	Diyaben	Keyboard	3	4500
4	04-11-2024	Priyanka	Monitor	2	24000
5	05-11-2024	Ovesh	Printer	1	8500