DBMS LAB ASSIGNMENT-1

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Section – B

Q1. Write an SQL query to insert a new student detail in StudentDetails

Code :

```
CREATE TABLE details (
  FIRSTNAME VARCHAR(25),
  ROLL INT,
  MARKS INT
);

// Q1
INSERT INTO details VALUES ('Aman',1,42);
INSERT INTO details VALUES ('Madan',21,69);
INSERT INTO details VALUES ('Harshit',34,84);
INSERT INTO details VALUES ('Ankit',56,96);
INSERT INTO details VALUES ('Daksh',10,52);
INSERT INTO details VALUES ('Divyansh',14,45);
INSERT INTO details VALUES ('Naman',38,89);
INSERT INTO details VALUES ('Junaid',36,94);
INSERT INTO details VALUES ('Bonda',34,72);
INSERT INTO details VALUES ('Swami',13,76);
```

FIRSTNAME	ROLL	MARKS
Aman	1	42
Madan	21	69
Harshit	34	84
Daksh	10	52
Divyansh	14	45
Naman	38	89
Junaid	36	94
Bonda	34	72
Swami	13	76
Ankit	56	96

Q2. Write an SQL query to select a specific student detail in the table

Code :

```
SELECT FIRSTNAME FROM details;
```

Output :

```
FIRSTNAME
--------------------
Aman
Madan
Harshit
Daksh
Divyansh
Naman
Junaid
Bonda
Swami
Ankit
```

Q3. Write an SQL query to update a project detail in StudentStipend table.

Code :

We first create a table with stipend of students :

```
//Q3
CREATE TABLE StudentStipend (
  firstname varchar(25),
  stipend int
);

INSERT INTO StudentStipend VALUES ('Aman',2000);
INSERT INTO StudentStipend VALUES ('Daksh',8000);
INSERT INTO StudentStipend VALUES ('Naman',7000);
INSERT INTO StudentStipend VALUES ('Madan',9000);
INSERT INTO StudentStipend VALUES ('Ankit',1000);
INSERT INTO StudentStipend VALUES ('Divyansh',5000);
INSERT INTO StudentStipend VALUES ('Bonda',4000);
INSERT INTO StudentStipend VALUES ('Junaid',3000);
INSERT INTO StudentStipend VALUES ('Swami',10000);
INSERT INTO StudentStipend VALUES ('Harshit',90000);

SELECT * FROM StudentStipend;
```

FIRSTNAME	STIPEND
Aman	2000
Daksh	8000
Naman	7000
Madan	9000
Ankit	1000
Divyansh	5000
Bonda	4000
Junaid	3000
Swami	10000
Harshit	90000

Now we update stipend to 3000 from 2000 for the name 'Aman'.

```
UPDATE StudentStipend
SET stipend=3000 WHERE firstname='Aman';
```

FIRSTNAME	STIPEND
Aman	3000
Daksh	8000
Naman	7000
Madan	9000
Ankit	1000
Divyansh	5000
Bonda	4000
Junaid	3000
Swami	10000
Harshit	90000

Q4. Write an SQL query to fetch student names having stipend greater than or equal to 7000 and less than or equal to 15000.

Code :

```
SELECT firstname,stipend
FROM StudentStipend
WHERE stipend>=7000 AND stipend<=15000;
```

Output :

FIRSTNAME	STIPEND
Daksh	8000
Naman	7000
Madan	9000
Swami	10000

Q5. Write an SQL query to fetch student names and stipend records Return student details even if the stipend records is not present for the student.

Code :

```
SELECT firstname,stipend FROM StudentStipend;
```

Output :

	FIRSTNAME	STIPEND
1	Aman	(null)
2	Daksh	(null)
3	Naman	(null)
4	Madan	9000
5	Ankit	1000
6	Divyansh	5000
7	Bonda	4000
8	Junaid	3000
9	Swami	10000
10	Harshit	90000

Q6. Write an SQL Query to fetch the number of students working in project 'P1'.

Here we first add a new column for projects in the table of Student Details.

```
UPDATE details
SET Projects='P1' WHERE firstname='Aman' OR
firstname='Madan' OR firstname='Divyansh' OR firstname='Junaid';

UPDATE details
SET Projects='P2' WHERE firstname='Harshit' OR firstname='Swami'
OR firstname='Ankit' OR firstname='Daksh' OR firstname='Naman' OR firstname='Bonda';

SELECT * FROM details;
```

Output :

This is the new table :

FIRSTNAME	ROLL	MARKS	PROJECTS
Aman	1	42	P1
Madan	21	69	P1
Harshit	34	84	P2
Daksh	10	52	P2
Divyansh	14	45	P1
Naman	38	89	P2
Junaid	36	94	P1
Bonda	34	72	P2
Swami	13	76	P2
Ankit	56	96	P2

Now we count :

```
SELECT count(*) FROM details WHERE Projects='P1';
```

We get the output as 4.

```
COUNT(*)
----------
4
```

Q.7 Write an SQL query to fetch all student records from student details table who have a stipend record in StudentStipend table.

The two tables are :

	FIRSTNAME	STIPEND
1	Aman	2000
2	Loki	7000
3	Aakash	8000
4	Samyak	10000
5	Naman	9000
6	Saatvik	6000
7	Bonda	90000
8	Aryan	9000
9	Divyansh	5000

	FIRSTNAME	ROLL	MARKS	PROJECTS
1	Aman	1	42	P1
2	Ankit	56	96	P2
3	Harshit	34	84	P2
4	Daksh	10	52	P2
5	Divyansh	14	45	P1
6	Naman	38	89	P2
7	Junaid	36	94	P1
8	Bonda	34	72	P2
9	Swami	13	76	P2

The code is :

```
SELECT * FROM details WHERE FIRSTNAME IN
(SELECT FIRSTNAME FROM StudentStipend);
```

Output :

	FIRSTNAME	ROLL	MARKS	PROJECTS
1	Aman	1	42	P1
2	Divyansh	14	45	P1
3	Naman	38	89	P2
4	Bonda	34	72	P2

Q8. Write an SQL query for fetching duplicate records from a table.

Code :

We first insert a few duplicate values and our new table looks like :

	FIRSTNAME	ROLL	MARKS	PROJECTS
1	Aman	1	42	P1
2	Ankit	56	96	P2
3	Harshit	34	84	P2
4	Daksh	10	52	P2
5	Divyansh	14	45	P1
6	Naman	38	89	P2
7	Junaid	36	94	P1
8	Bonda	34	72	P2
9	Swami	13	76	P2
10	Aman	1	42	P1
11	Divyansh	14	45	P1

The we write the query :

```
SELECT FIRSTNAME,ROLL,MARKS,COUNT(*) FROM details
GROUP BY FIRSTNAME,ROLL,MARKS
HAVING COUNT(*)>1
```

Output :

	FIRSTNAME	ROLL	MARKS	COUNT(*)
1	Aman	1	42	2
2	Divyansh	14	45	2

Q9. Write SQL query for removing duplicate from a table without using a temporary table.

Code :

```
WITH CTE AS
(
SELECT *,ROW_NUMBER() OVER
(PARTITION BY S_NO ORDER BY S_NO) AS RowNumber From details
)

DELETE FROM CTE WHERE
RowNumber > 1;
```

Output :

	FIRSTNAME	ROLL	MARKS	PROJECTS
1	Harshit	34	84	P2
2	Naman	38	89	P2
3	Junaid	36	94	P1
4	Divyansh	14	45	P1
5	Ankit	56	96	P2
6	Swami	13	76	P2
7	Bonda	34	72	P2
8	Aman	1	42	P1
9	Daksh	10	52	P2

Q. 10 Write SQL query to delete a Student Details table.

Code :

```
DELETE FROM details;
```

Output :

FIRSTNAME	ROLL	MARKS	PROJECTS

```
11 rows deleted.
```

We get an empty Table.

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