

Assignment – 3

Title : SQL Queries - all types of Join, Sub-Query and View

Problem Statement : Write at least 10 SQL queries for suitable database application using SQL DML statements.

```
mysql> use college
ERROR 1049 (42000): Unknown database 'college'
mysql> show DATABASES;
```

```
+-----+
| Database |
+-----+
| College |
| arbaaz |
| information_schema |
| mysql |
| performance_schema |
| sys |
+-----+
```

6 rows in set (0.01 sec)

```
mysql> SELECT * FROM Student;
```

```
+----+-----+-----+-----+-----+-----+
| roll | name | branch | class | age | city |
+----+-----+-----+-----+-----+-----+
| 1 | Aditya | Computer | TY | 20 | Pune |
| 67 | Pratik | Computer | TY | 20 | Parbhani |
| 65 | Ashok | Computer | TY | 20 | Dharashiv |
| 59 | Suraj | Computer | TY | 20 | Siddhatek |
| 61 | Onkar | Computer | TY | 20 | Solapur |
| 56 | Kunal | Computer | TY | 20 | Pune |
| 68 | Ramesh | Civil | TY | 20 | Nashik |
| 25 | Suresh | Mechanical | SY | 19 | Nanded |
+----+-----+-----+-----+-----+-----+
```

8 rows in set (0.00 sec)

```
mysql> SELECT * FROM Fees;
```

```
+-----+-----+-----+
| name | branch | fees |
+-----+-----+-----+
| Aditya | Computer | 100000 |
| Pratik | Computer | 60000 |
| Ashok | Computer | 59000 |
| Suraj | Computer | 90000 |
| Onkar | Computer | 120 |
+-----+-----+-----+
```

5 rows in set (0.00 sec)

```
/* INNER JOIN */
```

```
mysql> SELECT Student.roll,Student.name,Fees.fees FROM Student INNER JOIN Fees ON
Student.name = Fees.name;
```

```

+-----+-----+-----+
| roll | name | fees |
+-----+-----+-----+
| 1 | Aditya | 100000 |
| 67 | Pratik | 60000 |
| 65 | Ashok | 59000 |
| 59 | Suraj | 90000 |
| 61 | Onkar | 12 |
+-----+-----+-----+
5 rows in set (0.00 sec)

```

/*LEFT JOIN */

```
mysql> SELECT Student.roll,Student.name,Student.city,Fees.fees FROM Student LEFT JOIN Fees
ON Student.name = Fees.name;
```

```

+-----+-----+-----+
| roll | name | city | fees |
+-----+-----+-----+
| 1 | Aditya | Pune | 100000 |
| 67 | Pratik | Parbhani | 60000 |
| 65 | Ashok | Dharashiv | 59000 |
| 59 | Suraj | Siddhatek | 90000 |
| 61 | Onkar | Solapur | 120 |
| 56 | Kunal | Pune | NULL |
| 68 | Ramesh | Nashik | NULL |
| 25 | Suresh | Nanded | NULL |
+-----+-----+-----+

```

/*RIGHT JOIN */

```
mysql> SELECT Student.roll,Student.name,Student.city,Fees.fees FROM Student RIGHT JOIN
Fees ON Student.name = Fees.name;
```

```

+-----+-----+-----+
| roll | name | city | fees |
+-----+-----+-----+
| 1 | Aditya | Pune | 100000 |
| 67 | Pratik | Parbhani | 60000 |
| 65 | Ashok | Dharashiv | 59000 |
| 59 | Suraj | Siddhatek | 90000 |
| 61 | Onkar | Solapur | 120 |
+-----+-----+-----+
5 rows in set (0.00 sec)

```

```
/* CROSS JOIN */
```

```
mysql> SELECT Student.roll,Student.name,Student.branch,Fees.fees FROM Student CROSS JOIN Fees;
```

roll	name	branch	fees
1	Aditya	Computer	120
1	Aditya	Computer	90000
1	Aditya	Computer	59000
1	Aditya	Computer	60000
1	Aditya	Computer	100000
67	Pratik	Computer	120
67	Pratik	Computer	90000
67	Pratik	Computer	59000
67	Pratik	Computer	60000
67	Pratik	Computer	100000
65	Ashok	Computer	120
65	Ashok	Computer	90000
65	Ashok	Computer	59000
65	Ashok	Computer	60000
65	Ashok	Computer	100000
59	Suraj	Computer	120
59	Suraj	Computer	90000
59	Suraj	Computer	59000
59	Suraj	Computer	60000
59	Suraj	Computer	100000
61	Onkar	Computer	120
61	Onkar	Computer	90000
61	Onkar	Computer	59000
61	Onkar	Computer	60000
61	Onkar	Computer	100000
56	Kunal	Computer	120
56	Kunal	Computer	90000
56	Kunal	Computer	59000
56	Kunal	Computer	60000
56	Kunal	Computer	100000
68	Ramesh	Civil	120
68	Ramesh	Civil	90000
68	Ramesh	Civil	59000
68	Ramesh	Civil	60000
68	Ramesh	Civil	100000
25	Suresh	Mechanical	120
25	Suresh	Mechanical	90000
25	Suresh	Mechanical	59000
25	Suresh	Mechanical	60000
25	Suresh	Mechanical	100000

```
40 rows in set (0.00 sec)
```

/*MYSQL Subquery with WHERE Clause */

SELECT * FROM Student WHERE name = (SELECT name FROM Fees);

ERROR 1242 (21000): Subquery returns more than 1 row

mysql> SELECT * FROM Student WHERE name = (SELECT name FROM Fees WHERE fees = 60000);

roll	name	branch	class	age	city
67	Pratik	Computer	TY	20	Parbhani

1 row in set (0.01 sec)

/*MYSQL Subquery with comparison operators

Less than operator (<)*/*

mysql> SELECT * FROM Fees WHERE fees < (SELECT avg(fees) FROM Fees);

name	branch	fees
Pratik	Computer	60000
Ashok	Computer	59000
Onkar	Computer	120

3 rows in set (0.00 sec)

/*Greater than or equal to operator (>=)*/*

mysql> SELECT * FROM Fees WHERE fees >= (SELECT avg(fees) FROM Fees);

name	branch	fees
Aditya	Computer	100000
Suraj	Computer	90000

2 rows in set (0.00 sec)

/*MYSQL Subquery with IN and NOT IN operators

IN operator */

mysql> SELECT * FROM Student WHERE name IN (SELECT name FROM Fees);

roll	name	branch	class	age	city
1	Aditya	Computer	TY	20	Pune
67	Pratik	Computer	TY	20	Parbhani
65	Ashok	Computer	TY	20	Dharashiv
59	Suraj	Computer	TY	20	Siddhatek
61	Onkar	Computer	TY	20	Solapur

5 rows in set (0.14 sec)

/*NOT IN operator*/

mysql> SELECT * FROM Student WHERE name NOT IN (SELECT name FROM Fees);

roll	name	branch	class	age	city
56	Kunal	Computer	TY	20	Pune
68	Ramesh	Civil	TY	20	Nashik
25	Suresh	Mechanical	SY	19	Nanded

3 rows in set (0.03 sec)

/*MYSQL Subquery with FROM clause*/

mysql> SELECT name FROM (SELECT * FROM Student) as A;

name
Aditya
Pratik
Ashok
Suraj
Onkar
Kunal
Ramesh
Suresh

8 rows in set (0.00 sec)