

BASIC SQL QUERIES - I

AIM:

To study basic SQL queries such as

1. SELECT
2. INSERT
3. UPDATE
4. DELETE

QUESTIONS:

Create a table named Employee and populate the table as shown below.

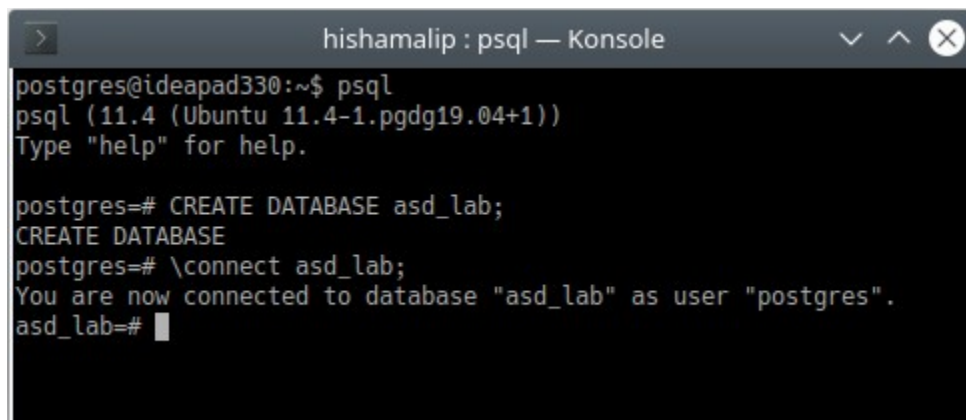
Emp_id	Emp_name	Dept	Salary (in US \$)
1	Michael	Production	\$2500
2	Joe	Production	\$2500
3	Smith	Sales	\$2250
4	David	Marketing	\$2900
5	Richard	Sales	\$1600
6	Jessy	Marketing	\$1800
7	Jane	Sales	\$2000
8	Janet	Production	\$3000
9	Neville	Marketing	\$2750
10	Richardson	Sales	\$1800

1. Create a database

Syntax: CREATE DATABASE <database_name>;

2. Connect to newly created database

Syntax: \c[onnect] <database_name>;



```
hishamalip : psql — Konsole
postgres@ideapad330:~$ psql
psql (11.4 (Ubuntu 11.4-1.pgdg19.04+1))
Type "help" for help.

postgres=# CREATE DATABASE asd_lab;
CREATE DATABASE
postgres=# \connect asd_lab;
You are now connected to database "asd_lab" as user "postgres".
asd_lab=#
```

3. Create a table named Employee and populate the table.

```
hishamalip : psql — Konsole <2>
asd_lab=# CREATE TABLE employee(
asd_lab(#      Emp_id int not null,
asd_lab(#      Emp_name varchar(20) not null,
asd_lab(#      Dept varchar(20) not null,
asd_lab(#      Salary int);
CREATE TABLE
asd_lab=#
```

4. Inserting data into table

```
hishamalip : psql — Konsole <2>
asd_lab=# INSERT INTO employee VALUES
          (1, 'Michael', 'Production', 2500),
          (2, 'Joe', 'Production', 2500),
          (3, 'Smith', 'Sales', 2250),
          (4, 'David', 'Marketing', 2900),
          (5, 'Richard', 'Sales', 1600),
          (6, 'Jessy', 'Marketing', 1800),
          (7, 'Jane', 'Sales', 2000),
          (8, 'Janet', 'Production', 3000),
          (9, 'Neville', 'Marketing', 2750),
          (10, 'Richardson', 'Sales', 1800);
INSERT 0 10
asd_lab=#
```

5. Display the details of all the employees.

```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT * FROM employee;
 emp_id | emp_name | dept      | salary
-----+-----+-----+-----
      1 | Michael  | Production |    2500
      2 | Joe      | Production |    2500
      3 | Smith    | Sales      |    2250
      4 | David    | Marketing  |    2900
      5 | Richard  | Sales      |    1600
      6 | Jessy    | Marketing  |    1800
      7 | Jane     | Sales      |    2000
      8 | Janet    | Production |    3000
      9 | Neville  | Marketing  |    2750
     10 | Richardson | Sales      |    1800
(10 rows)
asd_lab=#
```

6. Display the names and id's of all employees.

```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT Emp_id, Emp_name FROM employee;
 emp_id | emp_name
-----+-----
      1 | Michael
      2 | Joe
      3 | Smith
      4 | David
      5 | Richard
      6 | Jessy
      7 | Jane
      8 | Janet
      9 | Neville
     10 | Richardson
(10 rows)

asd_lab=#
```

7. Delete the entry corresponding to employee id:10.

```
hishamalip : psql — Konsole <2>
asd_lab=# DELETE FROM employee WHERE Emp_id = 10;
DELETE 1
asd_lab=# SELECT * FROM employee;
 emp_id | emp_name | dept      | salary
-----+-----+-----+-----
      1 | Michael  | Production | 2500
      2 | Joe      | Production | 2500
      3 | Smith    | Sales      | 2250
      4 | David    | Marketing  | 2900
      5 | Richard  | Sales      | 1600
      6 | Jessy    | Marketing  | 1800
      7 | Jane     | Sales      | 2000
      8 | Janet    | Production | 3000
      9 | Neville  | Marketing  | 2750
(9 rows)
```

8. Insert a new tuple to the table. The salary field of the new employee should be kept NULL.

```
hishamalip : psql — Konsole <2>
asd_lab=# INSERT INTO employee VALUES(11, 'Hisham', 'Production');
INSERT 0 1
asd_lab=# SELECT * FROM employee WHERE Emp_id = 11;
 emp_id | emp_name | dept      | salary
-----+-----+-----+-----
     11 | Hisham   | Production |
(1 row)

asd_lab=#
```

9. Find the details of all employees working in the marketing department.

```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT * FROM employee WHERE Dept = 'Marketing';
 emp_id | emp_name | dept    | salary
-----+-----+-----+-----
      4 | David    | Marketing | 2900
      6 | Jessie   | Marketing | 1800
      9 | Neville  | Marketing | 2750
(3 rows)

asd_lab=#
```

10. Add the salary details of the newly added employee.

```
hishamalip : psql — Konsole <2>
asd_lab=# UPDATE employee SET Salary = 1500 WHERE Emp_id = 11;
UPDATE 1
asd_lab=# SELECT * FROM employee WHERE Emp_id = 11;
 emp_id | emp_name | dept    | salary
-----+-----+-----+-----
     11 | Hisham   | Production | 1500
(1 row)

asd_lab=#
```

11. Update the salary of Richard to 1900\$.

```
hishamalip : psql — Konsole <2>
asd_lab=# UPDATE employee SET Salary = 1900 WHERE Emp_name = 'Richardson';
UPDATE 1
asd_lab=# SELECT * FROM employee WHERE Emp_name = 'Richardson';
 emp_id | emp_name | dept    | salary
-----+-----+-----+-----
     10 | Richardson | Sales | 1900
(1 row)

asd_lab=#
```

12. Find the details of all employees who are working for marketing and has a salary greater than 2000\$.

```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT * FROM employee WHERE Salary > 2000 AND Dept = 'Marketing';
 emp_id | emp_name | dept    | salary
-----+-----+-----+-----
      4 | David    | Marketing | 2900
      9 | Neville  | Marketing | 2750
(2 rows)

asd_lab=#
```

13. List the names of all employees working in the sales department and marketing department.

```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT Emp_name FROM employee WHERE Dept = 'Marketing' OR Dept = 'Sales';
 emp_name
-----
Smith
David
Richard
Jessy
Jane
Neville
Richardson
(7 rows)
```

14. . List the names and department of all employees whose salary is between 2300\$ and 3000\$.

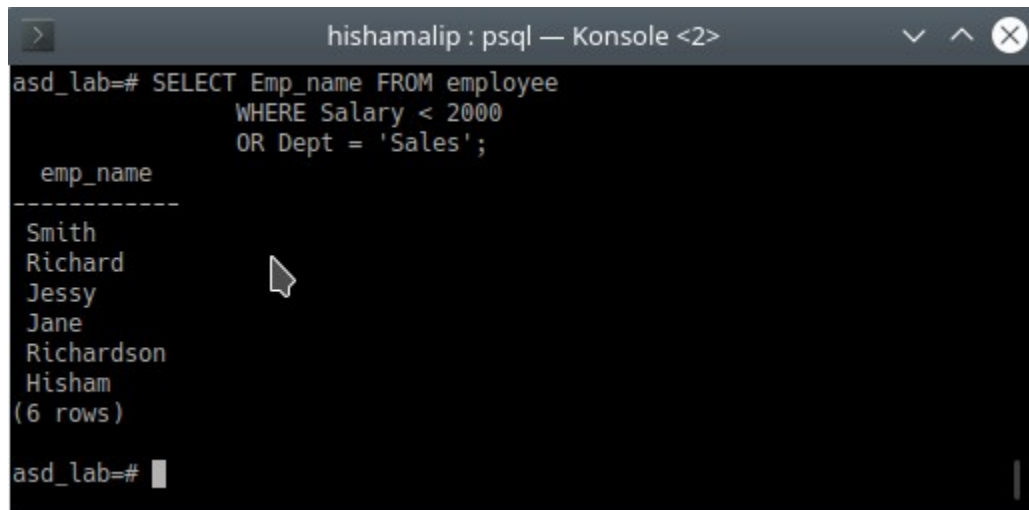
```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT Emp_name, Dept FROM employee WHERE Salary >= 2300 AND Salary <= 3000;
 emp_name | dept
-----+-----
Michael   | Production
Joe        | Production
David      | Marketing
Janet      | Production
Neville    | Marketing
(5 rows)

asd_lab=#
```

15. Update the salary of all employees working in production department 12%.

```
hishamalip : psql — Konsole <2>
asd_lab=# UPDATE employee SET Salary = Salary + (Salary * .12)
asd_lab=# WHERE Dept = 'Production';
UPDATE 4
asd_lab=# SELECT * FROM employee;
 emp_id | emp_name | dept      | salary
-----+-----+-----+-----
      3 | Smith    | Sales     | 2250
      4 | David    | Marketing | 2900
      5 | Richard  | Sales     | 1600
      6 | Jessy    | Marketing | 1800
      7 | Jane     | Sales     | 2000
      9 | Neville  | Marketing | 2750
     10 | Richardson | Sales     | 1900
      1 | Michael  | Production | 2800
      2 | Joe      | Production | 2800
      8 | Janet    | Production | 3360
     11 | Hisham   | Production | 1120
(11 rows)
```

16. Display the names of all employees whose salary is less than 2000\$ or working for sales department.



```
hishamalip : psql — Konsole <2>
asd_lab=# SELECT Emp_name FROM employee
          WHERE Salary < 2000
          OR Dept = 'Sales';

 emp_name 
-----
 Smith
Richard
  Jessy
   Jane
Richardson
   Hisham
(6 rows)

asd_lab=#
```

Result :

The query was executed and the output was obtained.