Creating DataBase

```
Username [postgres]: postgres
Password for user postgres:
create database dbfinserv;
```

Creating Table

```
create table employee(eid INT PRIMARY KEY NOT NULL, ename TEXT NOT
NULL, salary REAL);
CREATE TABLE
dbfinserv=# \d
          List of relations
 Schema |   Name   | Type  |  Owner
--------+----------+-------+----------
 public | employee | table | postgres
(1 row)
```

Connecting to Data Base

```
\c dbfinserv; #to connect the data base


\d employee; # description

select * from employee; #to view the table
 insert into employee values (4, 'Vishnu', 9);
update employee set ename = 'uttej' where eid = 1;
update employee set salary = salary + 10 where salary > 15;
select upper (ename) from employee;
  upper
---------
 VISHNU
 KSHITIJ
 HARA
 UTTEJ
 DATA
(5 rows)

select concat  (ename,'*',eid) from employee;
  concat
-----------
 vishnu*4
 kshitij*6
 hara*2
 uttej*1
 data*3
(5 rows)

select concat  (ename,'   ',eid) from employee;
   concat
-------------
```

```
 vishnu   4
 kshitij   6
 hara   2
 uttej   1
 data   3
(5 rows)

Select sum(salary) from employee;
 sum
-----
 109
(1 row)


Select count(*) from employee;
 count
-------
     5
(1 row)

select distinct(salary) from employee;
 salary
--------
     35
      8
     10
     28
(4 rows)

select distinct(salary,eid) from employee;
  row
--------
 (8,4)
 (10,6)
 (28,1)
 (28,2)
 (35,3)
(5 rows)


select eid,ename from employee group by eid having salary > 10;
 eid | ename
-----+-------
   2 | hara
   1 | uttej
   3 | data
(3 rows)

update employee set salary = null where salary > 0;
UPDATE 5
dbfinserv=# select * from employee;
 eid |  ename  | salary
-----+---------+--------
   4 | vishnu  |
```

```
   6 | kshitij |
   2 | hara    |
   1 | uttej   |
   3 | data    |
(5 rows)
```

Altering Table

```
alter table employee add column deptid int; #to add column

update employee set deptid = 101 where eid=2;

select * from employee;
 eid |  ename   | salary | deptid
-----+---------+--------+--------
   2 | hara    |     19 |    101
   6 | kshitij |     24 |    101
   1 | uttej   |     10 |    202
   3 | data    |     13 |    202
   4 | vishnu  |     18 |    303

select * from department;
 deptid | deptname
--------+----------
    101 | java
    202 | python
    303 | php
(3 rows)

alter table department add constraint fk_id PRIMARY KEY(deptid);
#updating primary key

\d department;
              Table "public.department"
  Column  |  Type   | Collation | Nullable | Default
----------+---------+-----------+----------+---------
 deptid   | integer |           | not null |
 deptname | text    |           |          |
Indexes:
```

Adding Foreign Key

```
alter table employee add FOREIGN KEY(deptid) REFERENCES
department(deptid);# to make foreign key
```

Joins

```
select eid, ename, salary from employee cross join department;
 eid |  ename  | salary
-----+---------+--------
   2 | hara    |     19
   2 | hara    |     19
```

```
   2 | hara    |     19
   6 | kshitij |     24
   6 | kshitij |     24
   6 | kshitij |     24
   1 | uttej   |     10
   1 | uttej   |     10
   1 | uttej   |     10
   3 | data    |     13
   3 | data    |     13
   3 | data    |     13
   4 | vishnu  |     18
   4 | vishnu  |     18
   4 | vishnu  |     18
(15 rows)

dbfinserv=# select * from employee;
 eid |  ename  | salary | deptid
-----+---------+--------+--------
   2 | hara    |     19 |    101
   6 | kshitij |     24 |    101
   1 | uttej   |     10 |    202
   3 | data    |     13 |    202
   4 | vishnu  |     18 |    303
(5 rows)

dbfinserv=# select * from department;
 deptid | deptname
--------+----------
    101 | java
    202 | python
    303 | php
(3 rows)
                                                        ^
dbfinserv=# select a.eid, a.salary, b.deptname from employee a inner
join department b on a.deptid = b.deptid;
 eid | salary | deptname
-----+--------+----------
   2 |     19 | java
   6 |     24 | java
   1 |     10 | python
   3 |     13 | python
   4 |     18 | php
(5 rows)
```