Assignment -5

Excersice-1

Q.1 Create the table SEMP with the following structure:-

EMPNO CHAR(4)

EMPNAME CHAR(20)

BASIC FLOAT

DEPTNO CHAR(2)

DEPTHEAD CHAR(4)

```
cdac=# create table SEMP(EMP_NO char(4),EMP_NAME char(20),BASIC float,DEPT_NO CHAR(2),DEPTHEAD CHAR(4));
CREATE TABLE
cdac=# \d SEMP;
                  Table "public.semp"
  Column  |       Type       | Collation | Nullable | Default
----------+------------------+-----------+----------+---------
 emp_no   | character(4)     |           |          |
 emp_name | character(20)    |           |          |
 basic    | double precision |           |          |
 dept_no  | character(2)     |           |          |
 depthead | character(4)     |           |          |
```

Q.2 Create the table SDEPT with the following structure:-

DEPTNO CHAR(2)

DEPTNAME CHAR(15)

```
cdac=# create table SDEPT(dept_no char(2),dept_name char(15));
CREATE TABLE
cdac=# \d SDEPT;
                   Table "public.sdept"
  Column   |      Type       | Collation | Nullable | Default
-----------+-----------------+-----------+----------+---------
 dept_no   | character(2)    |           |          |
 dept_name | character(15)   |           |          |
```

Q.3 **Insert into the SDEPT table the following values:-**

10, Development

20, Training

```
cdac=# create table SDEPT(dept_no char(2),dept_name char(15));
CREATE TABLE
cdac=# \d SDEPT;
                    Table "public.sdept"
  Column   |     Type      | Collation | Nullable | Default
-----------+---------------+-----------+----------+---------
 dept_no   | character(2)  |           |          |
 dept_name | character(15) |           |          |


cdac=# insert into SDEPT values(10,'development'),(20,'traning');
INSERT 0 2
cdac=# select *from SDEPT;
 dept_no |    dept_name
---------+-----------------
 10      | development
 20      | traning
(2 rows)
```

Q.4Insert into the SEMP table the following values:-

0001, SUNIL, 6000, 10

0002, HIREN, 8000, 20

0003, ALI, 4000, 10, 0001

0004, GEORGE, 6000, 0002

```
cdac=# create table SEMP(EMP_NO char(4),EMP_NAME char(20),BASIC float,DEPT_NO CHAR(2),DEPTHEAD CHAR(4));
CREATE TABLE
cdac=# \d SEMP;
                  Table "public.semp"
  Column  |       Type       | Collation | Nullable | Default
----------+------------------+-----------+----------+---------
 emp_no   | character(4)     |           |          |
 emp_name | character(20)    |           |          |
 basic    | double precision |           |          |
 dept_no  | character(2)     |           |          |
 depthead | character(4)     |           |          |
```

insert into SEMP values(0001,' SUNIL', 6000, 10,null),(0002, 'HIREN', 8000, 20,null),(0003, 'ALI', 4000, 10, 0001),(0004, 'GEORGE', 6000,null,

0002);

```
cdac=# select * from SEMP;
 emp_no |       emp_name       | basic | dept_no | depthead
--------+----------------------+-------+---------+----------
 1      |  SUNIL               |  6000 | 10      |
 2      | HIREN                |  8000 | 20      |
 3      | ALI                  |  4000 | 10      | 1
 4      | GEORGE               |  6000 |         | 2
(4 rows)
```

Q.5Create S, P, J, SPJ tables as specified below and insert a few rows in each table:-

SUPPLIER

(S#, Sname, Status, City) - S

PARTS

(P#, Pname, Color, Weight, City) - P

PROJECTS

(J#, Jname, City) - J

SUPPLIER-PARTS-PROJECT

(S#, P#, J#, Qty) - SPJ

Sample data for S# column:- 'S1', 'S2', 'S3', etc.

Sample data for P# column:- 'P1', 'P2', 'P3', etc.

Sample data for J# column:- 'J1', 'J2', 'J3', etc.

Sample data for Status column:- 10, 20, 30, etc.

```
cdac=# create table J(JNO varchar(2), JNAME varchar(10), CITY varchar(10),primary key(JNO));
CREATE TABLE
cdac=# insert into J values('J1','Sorter','Paris'),('J2','Display','Rome'),('J3','OCR','Athens'),('J4','Console','Athens'),('J5','RAID','London'),('
J6','EDS','Oslo'),('J7','ARP','London');
INSERT 0 7
cdac=# select *from J;
 jno |  jname  |  city
-----+---------+--------
cdac=# create table s(s_id varchar(2),s_name varchar(10),status integer,city varchar(10),primary key(s_id));
CREATE TABLE
cdac=# insert into s values('S1','Smith',20,'London'),('S2','Jones',10,'Paris'),('S3','Blake',30,'Paris'),('S4','Clark',20,'London'),('S5','Adams',3
0,'Athens');
INSERT 0 5
cdac=# select * from s;
 s_id | s_name | status |  city
------+--------+--------+--------
 S1   | Smith  |     20 | London
 S2   | Jones  |     10 | Paris
 S3   | Blake  |     30 | Paris
 S4   | Clark  |     20 | London
 S5   | Adams  |     30 | Athens
(5 rows)
```

```
cdac=# create table P(PNO varchar(2), PNAME varchar(10), COLOR varchar(10), WEIGHT integer, CITY varchar(10),primary key(PNO));
CREATE TABLE
cdac=# insert into P values('P1','Nut','Red',12,'London'),('P2','Bolt','green',17,'Paris'),('p3','skrew','blue',17,'rome'),('p4','skrew','red',14,'L
ondon'),('P5','Cam','Blue',12,'Paris'),('P6','Cog','Red',19,'London');
INSERT 0 6
cdac=# select * from P;
 pno | pname | color | weight |  city
-----+-------+-------+--------+--------
 P1  | Nut   | Red   |     12 | London
 P2  | Bolt  | green |     17 | Paris
 p3  | skrew | blue  |     17 | rome
 p4  | skrew | red   |     14 | London
 P5  | Cam   | Blue  |     12 | Paris
 P6  | Cog   | Red   |     19 | London
(6 rows)
```

```
cdac=# create table J(JNO varchar(2), JNAME varchar(10), CITY varchar(10),primary key(JNO));
CREATE TABLE
cdac=# insert into J values('J1','Sorter','Paris'),('J2','Display','Rome'),('J3','OCR','Athens'),('J4','Console','Athens'),('J5','RAID','London'),('
J6','EDS','Oslo'),('J7','ARP','London');
INSERT 0 7
cdac=# select *from J;
 jno |  jname  |  city
-----+---------+--------
 J1  | Sorter  | Paris
 J2  | Display | Rome
 J3  | OCR     | Athens
 J4  | Console | Athens
 J5  | RAID    | London
 J6  | EDS     | Oslo
 J7  | ARP     | London
(7 rows)
```

```
cdac=# create table SPJ(SNO varchar(2),PNO varchar(2), JNO varchar(2), quantity integer,foreign key (sno) references S(s_id),foreign key (PNO) refer
ences p(PNO),foreign key (JNO) references J(JNO));
CREATE TABLE
cdac=# insert into SPJ values('S1','P1','J1',200),('S1','P1','J4',700),('S2','p3','J1',400),('S2','p3','J2',200),('S2','p3','J3',200),('S2','p3','J4
',500),('S2','p3','J5',600);
INSERT 0 7
cdac=# insert into SPJ values('S2','p3','J6',400),('S2','p3','J7',800),('S2','P5','J2',100),('S3','p3','J1',200),('S3','p4','J2',500),('S4','P6','J3
',300),('S4','P6','J7',300),('S5','P2','J2',200);
INSERT 0 8
cdac=# insert into SPJ values('S5','P2','J4',100),('S5','P5','J5',500),('S5','P5','J7',100),('S5','P6','J2',200),('S5','P1','J4',100),('S5','p3','J4
',200),('S5','p4','J4',800),('S5','P5','J4',400);
INSERT 0 8
cdac=# select * from spj;
 sno | pno | jno | quantity
-----+-----+-----+----------
 S1  | P1  | J1  |      200
 S1  | P1  | J4  |      700
 S2  | p3  | J1  |      400
 S2  | p3  | J2  |      200
 S2  | p3  | J3  |      200
 S2  | p3  | J4  |      500
 S2  | p3  | J5  |      600
 S2  | p3  | J6  |      400
 S2  | p3  | J7  |      800
 S2  | P5  | J2  |      100
 S3  | p3  | J1  |      200
 S3  | p4  | J2  |      500
 S4  | P6  | J3  |      300
 S4  | P6  | J7  |      300
 S5  | P2  | J2  |      200
 S5  | P2  | J4  |      100
 S5  | P5  | J5  |      500
 S5  | P5  | J7  |      100
 S5  | P6  | J2  |      200
 S5  | P1  | J4  |      100
 S5  | p3  | J4  |      200
 S5  | p4  | J4  |      800
 S5  | P5  | J4  |      400
```

Q.5 Display all the data from the S table.

```
cdac=# select *from s;
 s_id | s_name | status |  city
------+--------+--------+--------
 S1   | Smith  |     20 | London
 S2   | Jones  |     10 | Paris
 S3   | Blake  |     30 | Paris
 S4   | Clark  |     20 | London
 S5   | Adams  |     30 | Athens
(5 rows)
```

Q.6 Display only the S# and SNAME fields from the S table.

```
cdac=# select s_id,s_name from s;
 s_id | s_name
------+--------
 S1   | Smith
 S2   | Jones
 S3   | Blake
 S4   | Clark
 S5   | Adams
(5 rows)
```

Q.7 Display the PNAME and COLOR from the P table for the CITY=”London”.

```
cdac=# select * from P;
 pno | pname | color | weight |  city
-----+-------+-------+--------+--------
 P1  | Nut   | Red   |     12 | London
 P2  | Bolt  | green |     17 | Paris
 p3  | skrew | blue  |     17 | rome
 p4  | skrew | red   |     14 | London
 P5  | Cam   | Blue  |     12 | Paris
 P6  | Cog   | Red   |     19 | London
(6 rows)


cdac=# select pname, color from P where city='London';
 pname | color
-------+-------
 Nut   | Red
 skrew | red
 Cog   | Red
(3 rows)
```

Q.8 Display all the Suppliers from London.

```
cdac=# select * from s;
 s_id | s_name | status |  city
------+--------+--------+--------
 S1   | Smith  |     20 | London
 S2   | Jones  |     10 | Paris
 S3   | Blake  |     30 | Paris
 S4   | Clark  |     20 | London
 S5   | Adams  |     30 | Athens
(5 rows)


cdac=# select s_name from s where city ='London';
 s_name
--------
 Smith
 Clark
(2 rows)
```

Q.9 Display all the Suppliers from Paris or Athens.

```
cdac=# select * from s;
 s_id | s_name | status |  city
------+--------+--------+--------
 S1   | Smith  |     20 | London
 S2   | Jones  |     10 | Paris
 S3   | Blake  |     30 | Paris
 S4   | Clark  |     20 | London
 S5   | Adams  |     30 | Athens
(5 rows)


cdac=# select s_name from s where city='Paris' or city='London';
 s_name
--------
 Smith
 Jones
 Blake
 Clark
(4 rows)


cdac=# select s_name from s where city='Paris' or city='Athens';
 s_name
--------
 Jones
 Blake
 Adams
(3 rows)
```

Q.10 Display all the Projects in Athens.

```
cdac=# select * from J;
 jno |  jname  |  city
-----+---------+--------
 J1  | Sorter  | Paris
 J2  | Display | Rome
 J3  | OCR     | Athens
 J4  | Console | Athens
 J5  | RAID    | London
 J6  | EDS     | Oslo
 J7  | ARP     | London
(7 rows)


cdac=# select jname from J where city='Athens';
  jname
---------
 OCR
 Console
(2 rows)
```

Q.11 Display all the Part names with the weight between 12 and 14 (inclusive of both).

```
cdac=# select * from P;
 pno | pname | color | weight |  city
-----+-------+-------+--------+--------
 P1  | Nut   | Red   |     12 | London
 P2  | Bolt  | green |     17 | Paris
 p3  | skrew | blue  |     17 | rome
 p4  | skrew | red   |     14 | London
 P5  | Cam   | Blue  |     12 | Paris
 P6  | Cog   | Red   |     19 | London
(6 rows)


cdac=# select pname from P where weight between 10 and 20;
 pname
-------
 Nut
 Bolt
 skrew
 skrew
 Cam
 Cog
(6 rows)


cdac=# select pname from P where weight between 12 and 14;
 pname
-------
 Nut
 skrew
 Cam
(3 rows)
```

Q 12. Display all the Suppliers with a Status greater than or equal to 20.

```
cdac=# select * from s;
 s_id | s_name | status |  city
------+--------+--------+--------
 S1   | Smith  |     20 | London
 S2   | Jones  |     10 | Paris
 S3   | Blake  |     30 | Paris
 S4   | Clark  |     20 | London
 S5   | Adams  |     30 | Athens
(5 rows)


cdac=# select s_name from s where status>=20;
 s_name
--------
 Smith
 Blake
 Clark
 Adams
(4 rows)
```

Q.13Display all the Suppliers except the Suppliers from London.

```
cdac=# select * from s;
 s_id | s_name | status |  city
------+--------+--------+--------
 S1   | Smith  |     20 | London
 S2   | Jones  |     10 | Paris
 S3   | Blake  |     30 | Paris
 S4   | Clark  |     20 | London
 S5   | Adams  |     30 | Athens
(5 rows)


cdac=# select s_name from s except select s_name from s where  city ='London';
 s_name
--------
 Blake
 Jones
 Adams
(3 rows)
```

Q.14 Display only the Cities from where the Suppliers come from.

```
cdac=# select * from s;
 s_id | s_name | status |  city
------+--------+--------+--------
 S1   | Smith  |     20 | London
 S2   | Jones  |     10 | Paris
 S3   | Blake  |     30 | Paris
 S4   | Clark  |     20 | London
 S5   | Adams  |     30 | Athens
(5 rows)


cdac=# select city from s where s_name !='Null';
  city
--------
 London
 Paris
 Paris
 London
 Athens
(5 rows)
```

Q.15 Assuming that the Part Weight is in GRAMS, display the same in MILLIGRAMS and KILOGRAMS.

```
cdac=# select * from P;
 pno | pname | color | weight |  city
-----+-------+-------+--------+--------
 P1  | Nut   | Red   |     12 | London
 P2  | Bolt  | green |     17 | Paris
 p3  | skrew | blue  |     17 | rome
 p4  | skrew | red   |     14 | London
 P5  | Cam   | Blue  |     12 | Paris
 P6  | Cog   | Red   |     19 | London
(6 rows)


cdac=# alter table P alter column weight type float;
ALTER TABLE
cdac=# select weight as weight_in_gram ,(weight/1000) as weight_in_kilogram from P;
 weight_in_gram | weight_in_kilogram
----------------+--------------------
             12 |              0.012
             17 |              0.017
             17 |              0.017
             14 |              0.014
             12 |              0.012
             19 |              0.019
(6 rows)


cdac=# select weight as weight_in_gram ,(weight*1000) as weight_in_Miligram from P;
 weight_in_gram | weight_in_miligram
----------------+--------------------
             12 |              12000
             17 |              17000
             17 |              17000
             14 |              14000
             12 |              12000
             19 |              19000
(6 rows)
```