Lab Assignment-5

THAPAR INSTITUTE
OF ENGINEERING & TECHNOLOGY
(Deemed to be University)

Name - Rachit Goyal
Roll.no - 101918056
CSBS/BS-3

DEPTNO	DNAME
10	Acc
20	comp
30	elec

Download CSV

3 rows selected.

EMPNO	ENAME	JOB	SAL	DEPTNO
101	RAM	Prof	20000	10
102	ROHAN	AP	43000	20
104	PREET	Lect	55000	10
105	TEJAS	Lect	36000	30

Download CSV

4 rows selected.

1. List the total number of employees?

select count(*) from emp;

```
27  select * from emp;
28  select count(*) from emp;
29  select count(*) from dept;
30  select sum(sal), max(sal), min(sal) from emp where deptno = 30;
31  select ename from emp where sal=(select max(sal) from emp);
32  select deptno,sum(sal) total_sal from emp group by deptno;
```

COUNT(*)
4

Download CSV

2. List the total no of departments?

select count(*) from dept;

```
27  select * from emp;
28  select * from dept;
29  select count(*) from emp;
30  select count(*) from dept;
31  select sum(sal), max(sal), min(sal) from emp where deptno = 30;
32  select ename from emp where sal=(select max(sal) from emp);
```

COUNT(*)
3

Download CSV

3. List the total, maximum, & minimum salary where deptno is 30?

select sum(sal), max(sal), min(sal) from emp where deptno = 30;

```
27  select * from emp;
28  select * from dept;
29  select count(*) from emp;
30  select count(*) from dept;
31  select sum(sal), max(sal), min(sal) from emp where deptno = 30;
32  select ename from emp where sal=(select max(sal) from emp);
```

SUM(SAL)	MAX(SAL)	MIN(SAL)
36000	36000	36000

Download CSV

4. Display the name of the employee getting maximum salary?

select ename from emp where sal=(select max(sal) from emp);

```
select * from dept;
select count(*) from emp;
select count(*) from dept;
select sum(sal), max(sal), min(sal) from emp where deptno = 30;
select ename from emp where sal=(select max(sal) from emp);
select deptno,sum(sal) total_sal from emp group by deptno;
```

ENAME
PREET

Download CSV

5. Display the total salary for each department?

select deptno,sum(sal) total_sal from emp group by deptno;

```
select deptno,sum(sal) total_sal from emp group by deptno;

select job, sum(sal) total_sal from emp group by job;

select deptno,job,sum(sal) as "total salary" from emp group by deptno,job;

select avg(sal),job from emp where deptno = 20 group by job;


select job,sum(sal) as "total" from emp where job<>'Manager' group by job;

select job,avg(sal) from emp where deptno = 20 group by job having sum(sal)>20
```

DEPTNO	TOTAL_SAL
30	36000
10	75000
20	43000

Download CSV

6. Display the total salary for each job.

select job, sum(sal) total_sal from emp group by job;

```
35
36  select job, sum(sal) total_sal from emp group by job;
37
38  select deptno,job,sum(sal) as "total salary" from emp group by deptno,job;
39
40  select avg(sal),job from emp where deptno = 20 group by job;
41
42
43  select job,sum(sal) as "total" from emp where job<>'Manager' group by job;
44
45  select job,avg(sal) from emp where deptno = 20 group by job having sum(sal)>20
46
```

JOB	TOTAL_SAL
Lect	91000
AP	43000
Prof	20000

Download CSV

3 rows selected.

7. Display the total salary for each job within each department.

select deptno,job,sum(sal) as "total salary" from emp group by deptno,job;

```
37
38  select deptno,job,sum(sal) as "total salary" from emp group by deptno,job;
39
40  select avg(sal),job from emp where deptno = 20 group by job;
41
42
43  select job,sum(sal) as "total" from emp where job<>'Manager' group by job;
44
45  select job,avg(sal) from emp where deptno = 20 group by job having sum(sal)>20
46
```

DEPTNO	JOB	total salary
20	AP	43000
30	Lect	36000
10	Prof	20000
10	Lect	55000

Download CSV

4 rows selected.

8. Display the average salary for each job in deptno 20.

select avg(sal),job from emp where deptno = 20 group by job;

```
37
38  select deptno,job,sum(sal) as "total salary" from emp group by deptno,job;
39
40  select avg(sal),job from emp where deptno = 20 group by job;
41
42
43  select job,sum(sal) as "total" from emp where job<>'Manager' group by job;
44
45  select job,avg(sal) from emp where deptno = 20 group by job having sum(sal)>20
46
```

AVG(SAL)	JOB
43000	AP

Download CSV

9. Display the total salary for each job excluding the *'manager'* job.

select job,sum(sal) as "total" from emp where job<>'Manager' group by job;

```
39
40  select avg(sal),job from emp where deptno = 20 group by job;
41
42
43  select job,sum(sal) as "total" from emp where job<>'Manager' group by job;
44
45  select job,avg(sal) from emp where deptno = 20 group by job having sum(sal)>20
46
```

JOB	total
Lect	91000
AP	43000
Prof	20000

Download CSV

3 rows selected.

10. Display the average salary for each job in deptno 20, but only display those jobs where total salary is greater than 2000 & display the output in descending order of salary?

select job,avg(sal) from emp where deptno = 20 group by job having sum(sal)>2000 order by sum(sal) desc;

```
45  select job,avg(sal) from emp where deptno = 20 group by job having sum(sal)>2000 order by sum(sal) desc;
46
47  select deptno,count(*) as "NUMBER" from emp where deptno<>10 group by deptno having count(*)>5 order by co
48
49  select dept.deptno,count(*) as "NUMBER" from emp,dept where dname<>'comp' and emp.deptno=dept.deptno group
50
51  select count(*) from emp where job = 'prof';
52  select count(*) from emp where job ='prof' and deptno = 10;
53  select deptno ,count(*) "Number" from emp where job = 'prof' group by deptno;
54  select deptno,job,count(*) "Number" from emp group by deptno,job;
55
```

JOB	AVG(SAL)
AP	43000

Download CSV

11. Display the total no of employees for each department excluding the dno 10 & display only those departments where more then five (5) employees work. Display the output in descending order of total no of employees?

select deptno,count(*) as "NUMBER" from emp where deptno<>10 group by deptno having count(*)>5 order by count(*) desc;

```
46
47  select deptno,count(*) as "NUMBER" from emp where deptno<>10 group by deptno having count(*)>5 order by count(*) desc;
48
49  select dept.deptno,count(*) as "NUMBER" from emp,dept where dname<>'comp' and emp.deptno=dept.deptno group by dept.dept
50
51  select count(*) from emp where job = 'prof';
52  select count(*) from emp where job ='prof' and deptno = 10;
53  select deptno ,count(*) "Number" from emp where job = 'prof' group by deptno;
54  select deptno,job,count(*) "Number" from emp group by deptno,job;
55
```

no data found

12. Display the total no of employees for each department excluding the comp dept & display only those departments where more then five (5) employees work. Display the output in descending order of total no of employees?

select dept.deptno,count(*) as "NUMBER" from emp,dept where dname<>'comp' and emp.deptno=dept.deptno group by dept.deptno having count(*)>5 order by dept.deptno desc;

```
select deptno,count(*) as "NUMBER" from emp where deptno<>10 group by deptno having count(*)>5 order by count(*) desc;

select dept.deptno,count(*) as "NUMBER" from emp,dept where dname<>'comp' and emp.deptno=dept.deptno group by dept.deptno having count(*)>5 order by dept.deptno desc;

select count(*) from emp where job = 'prof';
select count(*) from emp where job ='prof' and deptno = 10;
select deptno ,count(*) "Number" from emp where job = 'prof' group by deptno;
select deptno,job,count(*) "Number" from emp group by deptno,job;
```

no data found

13. Display total number of prof in univ.

select count(*) from emp where job = 'prof';

```
select count(*) from emp where job = 'prof';
select count(*) from emp where job ='prof' and deptno = 10;
select deptno ,count(*) "Number" from emp where job = 'prof' group by deptno;
select deptno,job,count(*) "Number" from emp group by deptno,job;
```

COUNT(*)
0

Download CSV

14. Display total number of prof in deptno 10.

select count(*) from emp where job ='prof' and deptno = 10;

```
select count(*) from emp where job = 'prof';
select count(*) from emp where job ='prof' and deptno = 10;
select deptno ,count(*) "Number" from emp where job = 'prof' group by deptno;
select deptno,job,count(*) "Number" from emp group by deptno,job;
```

COUNT(*)
0

Download CSV

15. Display total number of prof in each dept.

select deptno ,count(*) "Number" from emp where job = 'prof' group by deptno;

```
51  select count(*) from emp where job = 'prof';
52  select count(*) from emp where job ='prof' and deptno = 10;
53  select deptno ,count(*) "Number" from emp where job = 'prof' group by deptno;
54  select deptno,job,count(*) "Number" from emp group by deptno,job;
55
```

```
no data found
```

16. Display total number of emp working in each job in each dept.

select deptno,job,count(*) "Number" from emp group by deptno,job;

```
54  select deptno,job,count(*) "Number" from emp group by deptno,job;
55
56  create table student(
57  RNO int,
58  NAME varchar(20),
```

DEPTNO	JOB	Number
20	AP	1
30	Lect	1
10	Prof	1
10	Lect	1

Download CSV

Queries based on Student Table

RNO	NAME	CLASS	CITY	MARKS	INSTITUTE
1	raj	be3	pta	80	tu
2	ram	be3	del	85	pu
3	sham	be2	jal	89	tu
4	sham	be3	jal	90	pec
5	shan	be3	pta	70	pec
6	rajan	be3	pta	97	tu
1	ram	be3	pta	97	pu

create table student(

```
RNO int,
NAME varchar(20),
CLASS varchar(20),
CITY varchar(20),
MARKS int,
INSTITUTE varchar(20)
);
insert into student values(1,'raj','be3','pta',80,'tu');
insert into student values(2,'ram','be3','del',85,'pu');
insert into student values(3,'sham','be2','jal',89,'tu');
insert into student values(4,'sham','be3','jal',90,'pec');
insert into student values(5,'shan','be3','pta',70,'pec');
insert into student values(6,'rajan','be3','pta',97,'tu');
insert into student values(7,'ram','be3','pta',97,'pu');
```

RNO	NAME	CLASS	CITY	MARKS	INSTITUTE
1	raj	be3	pta	80	tu
2	ram	be3	del	85	pu
3	sham	be2	jal	89	tu
4	sham	be3	jal	90	pec
5	shan	be3	pta	70	pec
6	rajan	be3	pta	97	tu
7	ram	be3	pta	97	pu

Download CSV

17. List the total number of students from each city.

select count(*),city from student group by city;

```
74  select count(*),city from student group by city;
75  select city from student having count(*)=(select max(
76  select institute from student having count(*)=(select
77  select institute from student where marks in (select
78  select institute from student where institute<>'tu' h
79
```

COUNT(*)	CITY
4	pta
1	del
2	jal

Download CSV

18. Name of city having max students.

select city from student having count(*)=(select max(count(*))as "total" from student group by city)group by city;

```
75  select city from student having count(*)=(select max(count(*))as "total" from student group by city)group by city;
76  select institute from student having count(*)=(select min(count(*))as "total" from student group by institute)group by institute;
77  select institute from student where marks in (select max(marks) from student);
78  select institute from student where institute<>'tu' having count(*)>5 group by institute;
79
```

CITY
pta

Download CSV

19. Name of Institute having min students.

select institute from student having count(*)=(select min(count(*))as "total" from student group by institute)group by institute;

```
76 select institute from student having count(*)=(select min(count(*))as "total" from student group by institute)group by institute;
77 select institute from student where marks in (select max(marks) from student);
78 select institute from student where institute<>'tu' having count(*)>5 group by institute;
79
```

INSTITUTE
pec
pu

Download CSV

20. Name of Institute whose student got max marks.

select institute from student where marks in (select max(marks) from student);

```
77 select institute from student where marks in (select max(marks) from student);
78 select institute from student where institute<>'tu' having count(*)>5 group by institute;
79
```

INSTITUTE
tu
pu

Download CSV
2 rows selected.

21. Name of institute having more than 5 students excluding ‘tu’.

select institute from student where institute<>'tu' having count(*)>5 group by institute;

```
77 select institute from student where marks in (select max(marks) from student);
78 select institute from student where institute<>'tu' having count(*)>5 group by institute;
79
```

no data found

Code-

```
create table dept(
deptno int primary key,
dname char(20) check (dname in ('Acc','comp','elec'))
);

insert into dept values(10,'Acc');
insert into dept values(20,'comp');
insert into dept values(30,'elec');
insert into dept values(40,'man');

create table emp(
empno int PRIMARY KEY,
ename varchar(20) constraint name_emp UNIQUE,
job char(20) check (job in ('Prof','AP','Lect')),
sal int constraint sal_con not null,
deptno int constraint fkey references dept(deptno)
);

insert into emp values(101,'RAM','Prof',20000,10);
insert into emp values(102,'ROHAN','AP',43000,20);
insert into emp values(103,'RAJESH','PROF',15000,30);
```

```
insert into emp values(104,'PREET','Lect',55000,10);

insert into emp values(105,'TEJAS','Lect',36000,30);

insert into emp values(106,'TARAN','PA',29000,40);



select count(*) from emp;

select count(*) from dept;

select sum(sal), max(sal), min(sal) from emp where deptno = 30;

select ename from emp where sal=(select max(sal) from emp);

select deptno,sum(sal) total_sal from emp group by deptno;

select job, sum(sal) total_sal from emp group by job;

select deptno,job,sum(sal) as "total salary" from emp group by
deptno,job;

select avg(sal),job from emp where deptno = 20 group by job;

select job,sum(sal) as "total" from emp where job<>'Manager' group by
job;

select job,avg(sal) from emp where deptno = 20 group by job having
sum(sal)>2000 order by sum(sal) desc;

select deptno,count(*) as "NUMBER" from emp where deptno<>10
group by deptno having count(*)>1 order by count(*) desc;

select dept.deptno,count(*) as "NUMBER" from emp,dept where
dname<>'comp' and emp.deptno=dept.deptno group by dept.deptno
having count(*)>5 order by dept.deptno desc;

select count(*) from emp where job = 'prof';

select count(*) from emp where job ='prof' and deptno = 10;
```

```
select deptno ,count(*) "Number" from emp where job = 'prof' group by deptno;

select deptno,job,count(*) "Number" from emp group by deptno,job;


create table student(

RNO int,

NAME varchar(20),

CLASS varchar(20),

CITY varchar(20),

MARKS int,

INSTITUTE varchar(20)

);


insert into student values(1,'raj','be3','pta',80,'tu');

insert into student values(2,'ram','be3','del',85,'pu');

insert into student values(3,'sham','be2','jal',89,'tu');

insert into student values(4,'sham','be3','jal',90,'pec');

insert into student values(5,'shan','be3','pta',70,'pec');

insert into student values(6,'rajan','be3','pta',97,'tu');

insert into student values(7,'ram','be3','pta',97,'pu');


select count(*),city from student group by city;

select city from student having count(*)=(select max(count(*))as "total"
from student group by city)group by city;
```

select institute from student having count(*)=(select min(count(*))as "total" from student group by institute)group by institute;

select institute from student where marks in (select max(marks) from student);

select institute from student where institute<>'tu' having count(*)>5 group by institute;