

# Assignment-05

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Subject-Database Management System

Subject Code-BCSC 0861

1. IDs and names of students who have applied to major in CS at some college.

```
1  
2 select sid,sname from student where sid in (select sid from apply where major='CS');
```

SID	SNAME
123	Amy
345	Craig
543	Craig
876	Irene
987	Helen

2. Find ID and name of student having the same high school size as Jay.

```
1
2 select sid,sname from student where sizehs in (select sizehs from student where sname='Jay');
```

SID	SNAME
234	Bob
765	Jay

3-Find ID and name of student having the same high school size as Jay but result should not include Jay.

```
1 v select sid,sname from student where sizehs in (select sizehs from student where sname='Jay') and
2 sname!='Jay';
```

SID	SNAME
234	Bob

4-Find the name of student with their GPA and Sid whose GPA not equal to GPA of Irene?

```
1 select sname,gpa from student where gpa not in (select gpa from student where sname='Irene');
```

SNAME	GPA
Helen	3.7
Edward	2.9
Jay	2.9
Bob	3.6
Fay	3.8
Craig	3.5
Gary	3.4
Craig	3.4

5-Find college where any student having their name started from J have applied?

```
1 v select cname from college where cname in (select cname from apply where sid in (select sid from
2 student where sname like 'J%'));
```

CNAME
Cornell
Stanford

6-. Find all different major where Irene has applied?

```
1 select major from apply where sid in (select sid from student where sname='Irene');
```

MAJOR
CS
biology
marine biology

7-Find IDs of student and major who applied in any of major Irene had applied to?

```
1 v select sid,major from apply where major in (select major from apply where sid in (select sid
2 from student where sname='Irene'));
```

SID	MAJOR
123	CS
123	CS
234	biology
345	CS
543	CS
876	CS
876	biology
876	marine biology
987	CS
987	CS

8-Find IDs of student and major who applied in any of major Irene had applied to? But this time exclude Irene sID from the list.

```
1
2 v select sid,major from apply where major in (select major from apply where sid in (select sid
3   from student where sname='Irene')) and sid not in (select sid from student where sname='Irene');
```

SID	MAJOR
543	CS
987	CS
987	CS
345	CS
234	biology
123	CS
123	CS

9-Give the number of colleges Jay applied to? (Remember count each college once no matter if he applied to the same college twice with different major).

```
1 select distinct(cname) from apply where sid in (select sid from student where sname='Jay');
```

CNAME
Cornell
Stanford

10-Find SID of student who applied to more or same number of college where Jay has applied?

1	v	select sid from apply group by sid having (count(cname)>=(select count(distinct cname)
2		from apply where sid in (select sid from student where sname='Jay')));

SID
123
345
765
876
987

11-Find details of Students who applied to major CS but not applied to major EE? (SID 987, 876, 543 should only be include in result).

1	v	select * from student where sid in(select sid from apply where major='CS') and sid not
2		in(select sid from apply where major='EE');

SID	SNAME	GPA	SIZEHS
543	Craig	3.4	2000
876	Irene	3.9	400
987	Helen	3.7	800

12-All colleges such that some other college is in the same state. (Cornell should not be part of the result as no other college in New York Hint: use exists).

```

1 v select cname from college where state in (select state from college group by state having count
2 (state)>1);

```

CNAME
Stanford
Berkeley
MIT
Harvard

13-Find the college with the highest enrollment.

```

1 select cname from college where enrollment in (select max(enrollment) from college);

```

CNAME
Harvard

14-. Find the name of student having the lowest GPA.

```

1 select sname from student where gpa in(select min(gpa) from student);

```

SNAME
Edward
Jay

## 15-Find the most popular major.

```
1 select major from apply group by major having count(*) in (select max(count(*)) from apply
2 group by major);
```

MAJOR
CS

## 16-Find sID, sName, sizeHS of all students NOT from the smallest HS.

```
1 select sid,sname,sizehs from student where sizehs not in (select min(sizehs) from student);
```

SID	SNAME	SIZEHS
123	Amy	1000
234	Bob	1500
345	Craig	500
456	Doris	1000
567	Edward	2000
789	Gary	800
987	Helen	800
876	Irene	400
765	Jay	1500
654	Amy	1000
543	Craig	2000

## 17-Find the name of the student who applies to all the colleges where sID 987 has applied?(Hint: see Query Find IDs of student applied to all colleges).

```

1 v select sName from Student where SID in (select sID from Apply where cName in (select cName
2   from Apply where sID in (987)) group by SID having count(distinct cName) = (select count
3   (distinct cName) from Apply where sID in (987)));

```

SNAME
Amy
Helen

18-Find the college where all the students have applied.

```

1 v select cName from College where (select count(distinct SID) from Student)=(select count
2   (distinct sID) from Apply where Apply.cName = College.cName);

```

no data found

19-Find sid of students who have not applied to Stanford.

```

1 select distinct sid from apply where sid not in(select sid from apply where cname='Stanford');

```

SID
543
345
234

20-Find sid of Students that applied to both Stanford and Berkeley.



```

1 v select distinct sid from apply where sid in (select sid from apply
2   where cname = 'Stanford') and sid in (select sid from apply where
3   cname = 'Berkeley');

```

SID
987
123

21-Give a list of all names including all names of colleges and students.

```

1 v select distinct sname from student union select distinct cname
2   from college;

```

SNAME
Amy
Berkeley
Bob
Cornell
Craig
Doris
Edward
Fay
Gary
Harvard
Helen
Irene

22-Create a table ApplicationInfo having columns sID: int, sName:varchar2(10), and number\_of\_applications: number(2) they filed? Populate this table with appropriate data using the insert command.

```
1 v create table ApplicationInfo (sID INT,sName  
2 VARCHAR2(10),number_of_applications NUMBER(2));
```

Table created.

23-Create a table ApplicationData and load with ID, name, and college where they applied with the state of the college (remember to include details of ALL students that have applied or not applied) on runtime using a single query.

```
1 v create table applicationdata as select s.sid, s.sname, a.cname as  
2 college, c.state from student s left join apply a on s.sid = a.sid left join  
3 college c on a.cname = c.cname;
```

Table created.

24-Stanford decides not to take any student who has also applied to its rival Berkeley turn their application decision to N.

```
1 v update apply set decision = 'N' where cname = 'Stanford' and sid in  
2 (select sid from apply where cname = 'Berkeley');
```

3 row(s) updated.

## 25-Delete applications that are filed to the city 'New York'.

```
1 v delete from apply where cname in (select cname from college
2 where state = 'NY');
```

6 row(s) deleted.