# DBMS ASSIGNMENT-3
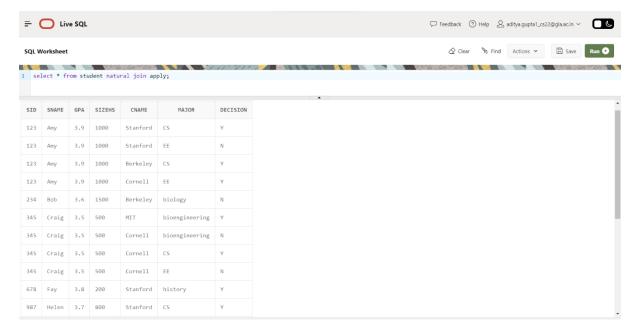
Q1. Produce a combine table in which each student is combine with every other application.
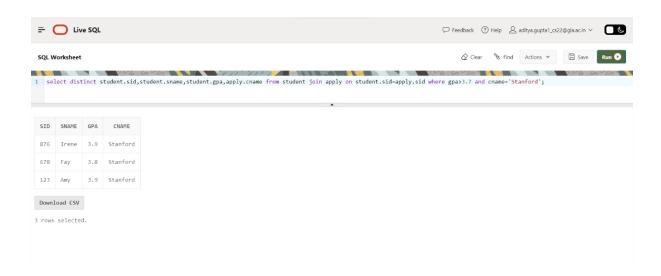
```
1  select * from student natural join apply;
```

| SID | SNAME | GPA | SIZEHS | CNAME | MAJOR | DECISION |
|-----|-------|-----|--------|-------|-------|----------|
| 123 | Amy | 3.9 | 1000 | Stanford | CS | Y |
| 123 | Amy | 3.9 | 1000 | Stanford | EE | N |
| 123 | Amy | 3.9 | 1000 | Berkeley | CS | Y |
| 123 | Amy | 3.9 | 1000 | Cornell | EE | Y |
| 234 | Bob | 3.6 | 1500 | Berkeley | biology | N |
| 345 | Craig | 3.5 | 500 | MIT | bioengineering | Y |
| 345 | Craig | 3.5 | 500 | Cornell | bioengineering | N |
| 345 | Craig | 3.5 | 500 | Cornell | CS | Y |
| 345 | Craig | 3.5 | 500 | Cornell | EE | N |
| 678 | Fay | 3.8 | 200 | Stanford | history | Y |
| 987 | Helen | 3.7 | 800 | Stanford | CS | Y |

Q2. Give Student ID, name, GPA and name of college and major each student applied to.

```
1  Select student.sid,student.sname,student.gpa,apply.cname,apply.major from student join apply on student.sid=apply.sid;
```

| SID | SNAME | GPA | CNAME | MAJOR |
|-----|-------|-----|-------|-------|
| 123 | Amy | 3.9 | Berkeley | CS |
| 123 | Amy | 3.9 | Stanford | CS |
| 123 | Amy | 3.9 | Cornell | EE |
| 123 | Amy | 3.9 | Stanford | EE |
| 234 | Bob | 3.6 | Berkeley | biology |
| 345 | Craig | 3.5 | Cornell | CS |
| 345 | Craig | 3.5 | Cornell | EE |
| 345 | Craig | 3.5 | Cornell | bioengineering |
| 345 | Craig | 3.5 | MIT | bioengineering |
| 543 | Craig | 3.4 | MIT | CS |
| 678 | Fay | 3.8 | Stanford | history |

## Q3. Find detail of applications who applied to California State.

```
1 ▽ Select apply.*
2   From apply
3   Join college on apply.cname = college.cname
4     Where college.state = 'CA';
5
```

| SID | CNAME | MAJOR | DECISION |
|-----|-------|-------|----------|
| 123 | Stanford | CS | Y |
| 123 | Stanford | EE | N |
| 123 | Berkeley | CS | Y |
| 234 | Berkeley | biology | N |
| 678 | Stanford | history | Y |
| 987 | Stanford | CS | Y |
| 987 | Berkeley | CS | Y |
| 876 | Stanford | CS | N |
| 765 | Stanford | history | Y |

Download CSV

## Q4. IDs, name, GPA of students and name of college with GPA > 3.7 applying to Stanford.

```
1   select distinct student.sid,student.sname,student.gpa,apply.cname from student join apply on student.sid=apply.sid where gpa>3.7 and cname='Stanford';
```

| SID | SNAME | GPA | CNAME |
|-----|-------|-----|-------|
| 876 | Irene | 3.9 | Stanford |
| 678 | Fay | 3.8 | Stanford |
| 123 | Amy | 3.9 | Stanford |

Download CSV

3 rows selected.

## Q5. Find detail of Student who apply to CS major and their application are rejected.

```
1  select student.sid,student.sname,student.gpa,student.sizehs from student join apply on student.sid=apply.sid where decision='N' and major='CS';
```

| SID | SNAME | GPA | SIZEHS |
|-----|-------|-----|--------|
| 876 | Irene | 3.9 | 400 |
| 543 | Craig | 3.4 | 2000 |

Download CSV

2 rows selected.

## Q6. Find detail of student and application who applied to colleges at New York.

```
1  Select student.sid,student.sname,student.gpa,student.sizehs,apply.cname,apply.major,apply.decision from student
2  join apply on student.sid=apply.sid
3  join college on college.cname=apply.cname
4    where state='NY';
```

| SID | SNAME | GPA | SIZEHS | CNAME | MAJOR | DECISION |
|-----|-------|-----|--------|---------|---------------|----------|
| 123 | Amy | 3.9 | 1000 | Cornell | EE | Y |
| 345 | Craig | 3.5 | 500 | Cornell | bioengineering | N |
| 345 | Craig | 3.5 | 500 | Cornell | CS | Y |
| 345 | Craig | 3.5 | 500 | Cornell | EE | N |
| 765 | Jay | 2.9 | 1500 | Cornell | history | N |
| 765 | Jay | 2.9 | 1500 | Cornell | psychology | Y |

Download CSV

6 rows selected.

## Q7. Find detail of student who have not applied to any of college.

```
1  select student.sid,student.sname,student.gpa,student.sizehs from student join apply on apply.sid=student.sid where decision='N';
2
```

| SID | SNAME | GPA | SIZEHS |
|-----|-------|-----|--------|
| 123 | Amy   | 3.9 | 1000   |
| 234 | Bob   | 3.6 | 1500   |
| 345 | Craig | 3.5 | 500    |
| 345 | Craig | 3.5 | 500    |
| 876 | Irene | 3.9 | 400    |
| 876 | Irene | 3.9 | 400    |
| 765 | Jay   | 2.9 | 1500   |
| 543 | Craig | 3.4 | 2000   |

Download CSV

8 rows selected.

## Q9. Find sID who have only one application.

```
1  select sid from apply group by sid having count(*)=1;
```

| SID |
|-----|
| 234 |
| 543 |
| 678 |

Download CSV

3 rows selected.

## Q10. Find name and GPA of applicants who apply to any college whose enrollment is not more than 25000.

**SQL Worksheet**                                    ⬗ Clear  ✎ Find  Actions ∨  💾 Save  **Run ▶**

```
1  select student.sname,student.gpa from student
2  join apply on student.sid =apply.sid
3  join college on apply.cname=college.cname
4  where enrollment<=25000;
```

| SNAME | GPA |
|-------|-----|
| Amy | 3.9 |
| Amy | 3.9 |
| Amy | 3.9 |
| Craig | 3.5 |
| Craig | 3.5 |
| Craig | 3.5 |
| Craig | 3.5 |
| Fay | 3.8 |
| Helen | 3.7 |
| Irene | 3.9 |

## Q11. Find pair of students (sID) having same GPA. (each pair should occur just once in result.

**SQL Worksheet**                                    ⬗ Clear  ✎ Find  Actions ∨  💾 Save  **Run ▶**

```
1  select a.sname ,b.sname from student a join student b on a.gpa=b.gpa and a.sid<b.sid;
```

| SNAME | SNAME |
|-------|-------|
| Amy | Doris |
| Craig | Gary |
| Amy | Irene |
| Doris | Irene |
| Amy | Irene |
| Edward | Jay |
| Amy | Amy |
| Doris | Amy |

Download CSV

8 rows selected.

## Q12. Find student and major he / she applied to.

```
1  select distinct apply.major,student.sid,student.sname from student
2  join apply on student.sid=apply.sid
3  join college on college.cname=apply.cname
4  where state='MA';
```

| MAJOR | SID | SNAME |
|---|---|---|
| biology | 876 | Irene |
| bioengineering | 345 | Craig |
| CS | 543 | Craig |
| marine biology | 876 | Irene |

Download CSV

4 rows selected.

NAME → ADITYA GUPTA
SECTION → B
UNIV ROLLNO. → 2215000094
CLASS ROLLNO. →47