

DBMS ASSIGNMENT-5

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

The screenshot shows the Live SQL interface. The query entered is:

```
1 SELECT sID, sName
2 FROM Student
3 WHERE sID IN (SELECT sID FROM Apply WHERE major = 'CS');
4
```

The results table shows 5 rows selected:

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

Buttons for "Download CSV" and "Run" are visible.

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

The screenshot shows the Live SQL interface. The query entered is:

```
1 SELECT sID, sName
2 FROM Student
3 WHERE sizeHS = (SELECT sizeHS FROM Student WHERE sName = 'Jay');
4
```

The results table shows 2 rows selected:

SID	SNAME
234	Bob
765	Jay

Buttons for "Download CSV" and "Run" are visible.

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



The screenshot shows the Live SQL interface with a query editor and a results table. The query is:

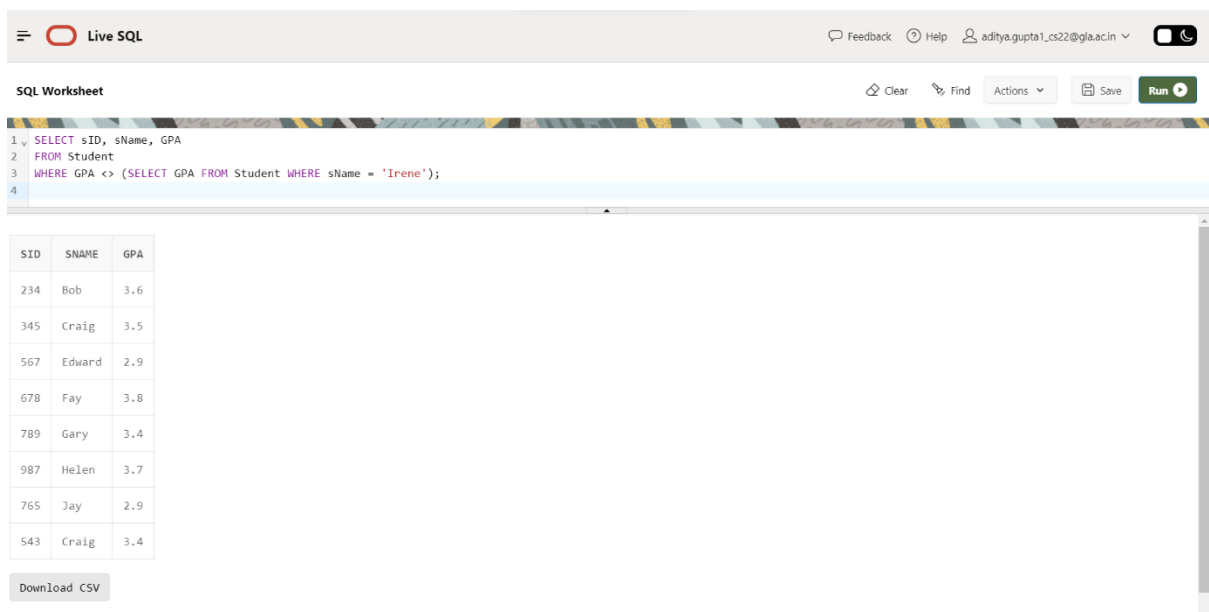
```
1 SELECT sID, sName
2 FROM Student
3 WHERE sizeHS = (SELECT sizeHS FROM Student WHERE sName = 'Jay') AND sName <> 'Jay';
4
```

The results table displays the following data:

SID	SNAME
234	Bob

Below the table is a "Download CSV" button.

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



The screenshot shows the Live SQL interface with a query editor and a results table. The query is:

```
1 SELECT sID, sName, GPA
2 FROM Student
3 WHERE GPA <> (SELECT GPA FROM Student WHERE sName = 'Irene');
4
```

The results table displays the following data:

SID	SNAME	GPA
234	Bob	3.6
345	Craig	3.5
567	Edward	2.9
678	Fay	3.8
789	Gary	3.4
987	Helen	3.7
765	Jay	2.9
543	Craig	3.4

Below the table is a "Download CSV" button.

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

The screenshot shows the Live SQL interface. The query entered is:

```
1 SELECT DISTINCT cName
2 FROM Apply
3 WHERE sID IN (SELECT sID FROM Student WHERE sName LIKE 'J%');
```

The results table shows the following data:

CNAME
Cornell
Stanford

Buttons: Download CSV, 2 rows selected.

6. Find all different major where Irene has applied?

The screenshot shows the Live SQL interface. The query entered is:

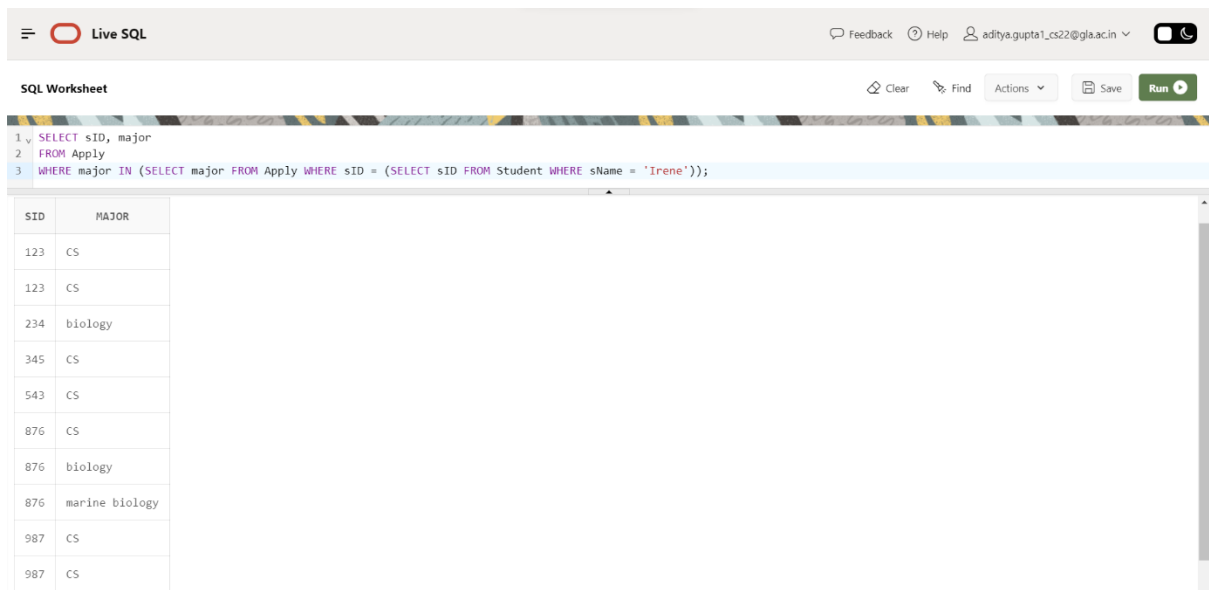
```
1 SELECT DISTINCT major
2 FROM Apply
3 WHERE sID = (SELECT sID FROM Student WHERE sName = 'Irene');
```

The results table shows the following data:

MAJOR
marine biology
biology
CS

Buttons: Download CSV, 3 rows selected.

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



The screenshot shows a web-based SQL editor interface. At the top, there's a header with the 'Live SQL' logo and user information. Below the header, the 'SQL Worksheet' section contains a text area with the following SQL query:

```
1 SELECT sID, major
2 FROM Apply
3 WHERE major IN (SELECT major FROM Apply WHERE sID = (SELECT sID FROM Student WHERE sName = 'Irene'));
```

Below the query editor, a table displays the results of the query. The table has two columns: 'SID' and 'MAJOR'. The results are as follows:

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.

Live SQL

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SQL Worksheet Clear Find Actions Save Run

```

1 SELECT sID, major
2 FROM Apply
3 WHERE major IN (SELECT major FROM Apply WHERE sID = (SELECT sID FROM Student WHERE sName = 'Irene')) AND sID != (SELECT sID FROM Student WHERE sName = 'Irene');

```

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

Download CSV

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

Live SQL

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SQL Worksheet Clear Find Actions Save Run

```

1 SELECT COUNT(DISTINCT cName) AS num_colleges
2 FROM Apply
3 WHERE sID = (SELECT sID FROM Student WHERE sName = 'Jay');

```

NUM_COLLEGES
2

Download CSV

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

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SQL Worksheet
Clear
Find
Actions
Save
Run

```

1 SELECT sID
2 FROM Apply
3 GROUP BY sID
4 HAVING COUNT(DISTINCT cName) >= (SELECT COUNT(DISTINCT cName) FROM Apply WHERE sID = (SELECT sID FROM Student WHERE sName = 'Jay'));
5

```

SID
876
345
987
765
123

Download CSV

5 rows selected.

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).

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SQL Worksheet
Clear
Find
Actions
Save
Run

```

1 SELECT sID, sName
2 FROM Student
3 WHERE sID IN (SELECT sID FROM Apply WHERE major = 'CS')
4 AND sID NOT IN (SELECT sID FROM Apply WHERE major = 'EE');
5

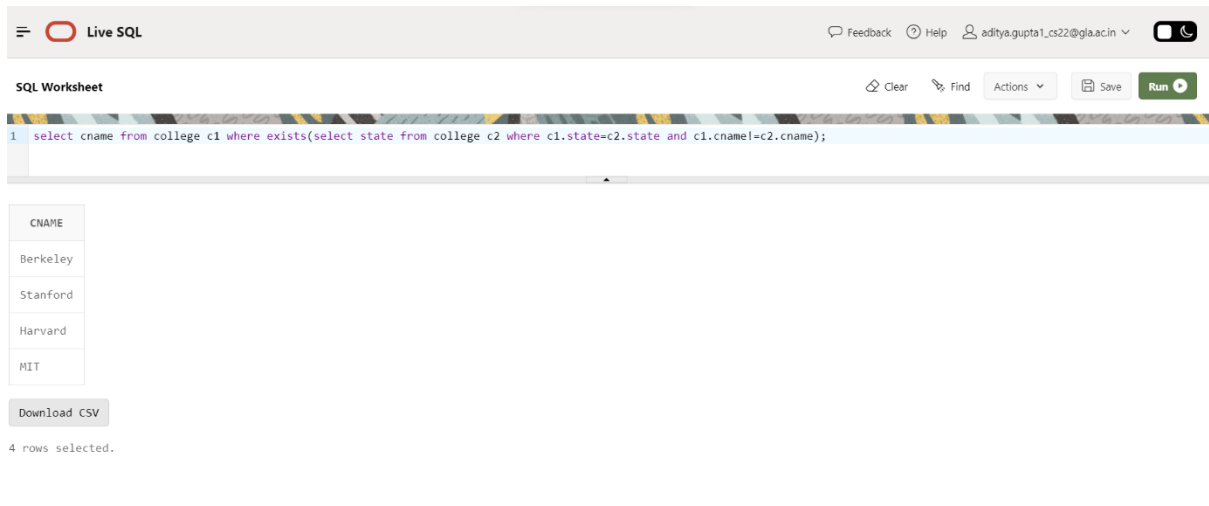
```

SID	SNAME
543	Craig
876	Irene
987	Helen

Download CSV

3 rows selected.

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



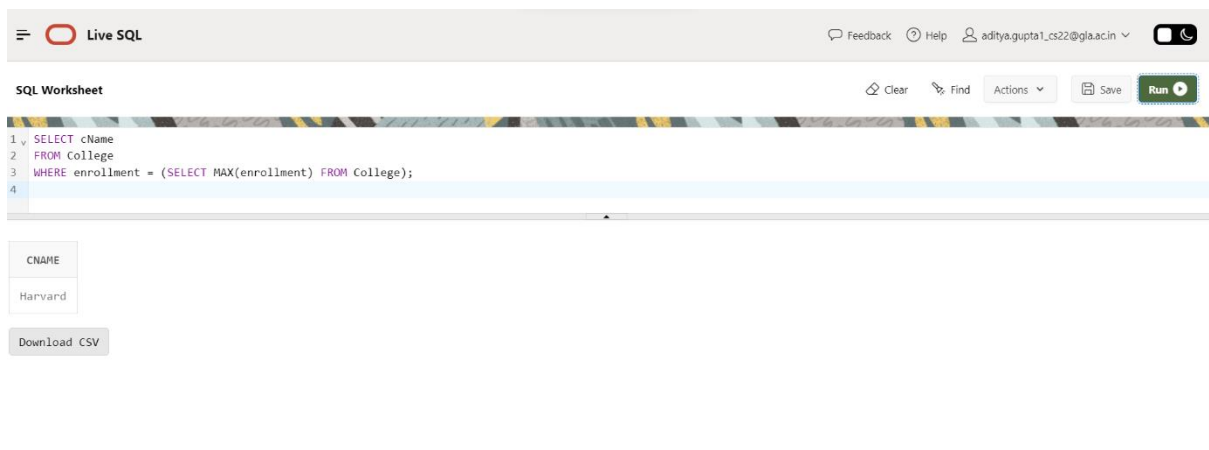
The screenshot shows the Live SQL interface. The query entered is: `1 select cname from college c1 where exists(select state from college c2 where c1.state=c2.state and c1.cname!=c2.cname);`. The results table has a single column 'CNAME' and contains four rows: Berkeley, Stanford, Harvard, and MIT. Below the table is a 'Download CSV' button and the text '4 rows selected.'

CNAME
Berkeley
Stanford
Harvard
MIT

Download CSV

4 rows selected.

13. Find the college with highest enrollment.



The screenshot shows the Live SQL interface. The query entered is: `1 SELECT cName
2 FROM College
3 WHERE enrollment = (SELECT MAX(enrollment) FROM College);
4`. The results table has a single column 'CNAME' and contains one row: Harvard. Below the table is a 'Download CSV' button.

CNAME
Harvard

Download CSV

14. Find name of student having lowest GPA.

The screenshot shows the Live SQL interface. The query entered is:

```
1 SELECT sName
2 FROM Student
3 WHERE GPA = (SELECT MIN(GPA) FROM Student);
4
```

The results table shows two rows:

SNAME
Edward
Jay

Below the table, it says "2 rows selected." and there is a "Download CSV" button.

15. Find the most popular major.

The screenshot shows the Live SQL interface. The query entered is:

```
1 select major, count(sid) from apply group by major having count(sid) = (select max(count(sid)) from apply group by major);
```

The results table shows one row:

MAJOR	COUNT(SID)
CS	7

Below the table, there is a "Download CSV" button.

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

Live SQL

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SQL Worksheet

Clear Find Actions Save Run

```
1 SELECT sID, sName, sizeHS
2 FROM Student
3 WHERE sizeHS != (SELECT MIN(sizeHS) FROM Student);
4
```

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	Amv	1000

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