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Class ➔ *BTech. 2nd Year { E }*

University RollNo. ➔ *1915004429*

Class RollNo. ➔ *'37'*

Subject ➔ *Database Management Systems Lab*

Subject Code ➔ *BCSC 0802*

Subject Teacher ➔ *MRS. Gunjan Bharadwaj*

QUERIES

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1. Produce a combine table in which each student is combine with every other application.

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SQL Worksheet Clear Find Actions Save Run

```
43 insert into Apply values (876, 'MIT', 'marine biology', 'N');
44 insert into Apply values (765, 'Stanford', 'history', 'Y');
45 insert into Apply values (765, 'Cornell', 'history', 'N');
46 insert into Apply values (765, 'Cornell', 'psychology', 'Y');
47 insert into Apply values (543, 'MIT', 'CS', 'N');
48
49 select * from Student,Apply;
50
```

SID	SNAME	GPA	SIZEHS	SID	CNAME	MAJOR	DECISION
123	Amy	3.9	1000	123	Stanford	CS	Y
123	Amy	3.9	1000	123	Stanford	EE	N
123	Amy	3.9	1000	123	Berkeley	CS	Y
123	Amy	3.9	1000	123	Cornell	EE	Y
123	Amy	3.9	1000	234	Berkeley	biology	N
123	Amy	3.9	1000	345	MIT	bioengineering	Y
123	Amy	3.9	1000	345	Cornell	bioengineering	N
123	Amy	3.9	1000	345	Cornell	CS	Y
123	Amy	3.9	1000	345	Cornell	EE	N
123	Amy	3.9	1000	678	Stanford	history	Y
123	Amy	3.9	1000	987	Stanford	CS	Y
123	Amy	3.9	1000	987	Berkeley	CS	Y
123	Amy	3.9	1000	876	Stanford	CS	N
123	Amy	3.9	1000	876	MIT	biology	Y
123	Amy	3.9	1000	876	MIT	marine biology	N

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

CODE →

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SQL Worksheet

Clear Find Actions Save Run

```
insert into Apply values (876, 'MIT', 'marine biology', 'N');
insert into Apply values (765, 'Stanford', 'history', 'Y');
insert into Apply values (765, 'Cornell', 'history', 'N');
insert into Apply values (765, 'Cornell', 'psychology', 'Y');
insert into Apply values (543, 'MIT', 'CS', 'N');

select Student.sID, sname , GPA,cNAME, major from Student, Apply where 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
765	Jay	2.9	Cornell	history
765	Jay	2.9	Stanford	history
765	Jay	2.9	Cornell	psychology
876	Irene	3.9	Stanford	CS

3. . Find detail of applications who applied to California State.

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SQL Worksheet

Clear Find Actions Save Run

```
insert into Apply values (876, 'MIT', 'marine biology', 'N');
insert into Apply values (765, 'Stanford', 'history', 'Y');
insert into Apply values (765, 'Cornell', 'history', 'N');
insert into Apply values (765, 'Cornell', 'psychology', 'Y');
insert into Apply values (543, 'MIT', 'CS', 'N');

select * from Apply inner join College on Apply.cNAME = College.collegeName where state = 'CA';
```

SID	CNAME	MAJOR	DECISION	COLLEGENAME	STATE	ENROLLMENT
123	Stanford	CS	Y	Stanford	CA	15000
123	Stanford	EE	N	Stanford	CA	15000
123	Berkeley	CS	Y	Berkeley	CA	36000
234	Berkeley	biology	N	Berkeley	CA	36000
678	Stanford	history	Y	Stanford	CA	15000
987	Stanford	CS	Y	Stanford	CA	15000
987	Berkeley	CS	Y	Berkeley	CA	36000
876	Stanford	CS	N	Stanford	CA	15000
765	Stanford	history	Y	Stanford	CA	15000

Download CSV

9 rows selected.

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

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Live SQL

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SQL Worksheet

Clear Find Actions Save Run

```
39  insert into Apply values (987, 'Stanford', 'CS', 'Y');
40  insert into Apply values (987, 'Berkeley', 'CS', 'Y');
41  insert into Apply values (876, 'Stanford', 'CS', 'N');
42  insert into Apply values (876, 'MIT', 'biology', 'Y');
43  insert into Apply values (876, 'MIT', 'marine biology', 'N');
44  insert into Apply values (765, 'Stanford', 'history', 'Y');
45  insert into Apply values (765, 'Cornell', 'history', 'N');
46  insert into Apply values (765, 'Cornell', 'psychology', 'Y');
47  insert into Apply values (543, 'MIT', 'CS', 'N');
48
49  select * from Student natural join Apply;
50  select sID,sNAME,GPA,cNAME from Student natural join Apply where  GPA > 3.7 and cNAME = 'Stanford';
51
52
53
```

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

Download CSV

4 rows selected.

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

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Live SQL

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SQL Worksheet

Clear Find Actions Save Run

```
38 insert into Apply values (678, 'Stanford', 'history', 'Y');
39 insert into Apply values (987, 'Stanford', 'CS', 'Y');
40 insert into Apply values (987, 'Berkeley', 'CS', 'Y');
41 insert into Apply values (876, 'Stanford', 'CS', 'N');
42 insert into Apply values (876, 'MIT', 'biology', 'Y');
43 insert into Apply values (876, 'MIT', 'marine biology', 'N');
44 insert into Apply values (765, 'Stanford', 'history', 'Y');
45 insert into Apply values (765, 'Cornell', 'history', 'N');
46 insert into Apply values (765, 'Cornell', 'psychology', 'Y');
47 insert into Apply values (543, 'MIT', 'CS', 'N');
48
49 select * from Student natural join Apply where major = 'CS' and decision = 'N';
50
51
```

SID	SNAME	GPA	SIZEHS	CNAME	MAJOR	DECISION
876	Irene	3.9	400	Stanford	CS	N
543	Craig	3.4	2000	MIT	CS	N

Download CSV

2 rows selected.

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

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SQL Worksheet

Clear Find Actions Save Run

```
1  select student.sID, student.sNAME, student.GPA, student.sizeHS, Apply.cNAME, Apply.major, Apply.decision from student
2  inner join apply on Student.sID = Apply.sID  inner join College on apply.cname = College.collegeName where college.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.

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

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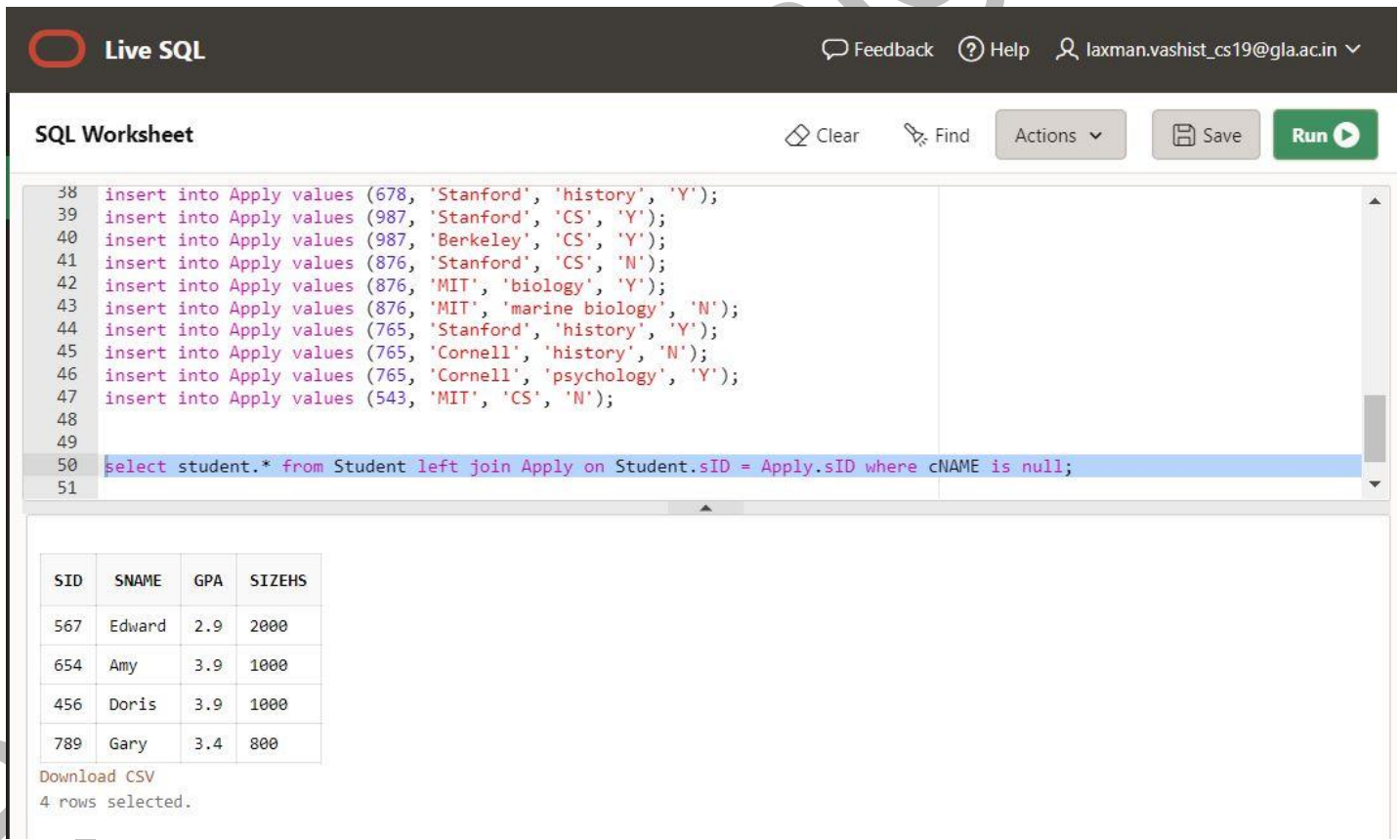

8. Find college where no student have applied.

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SQL Worksheet

Clear Find Actions Save Run

```
insert into Apply values (678, 'Stanford', 'history', 'Y');
insert into Apply values (987, 'Stanford', 'CS', 'Y');
insert into Apply values (987, 'Berkeley', 'CS', 'Y');
insert into Apply values (876, 'Stanford', 'CS', 'N');
insert into Apply values (876, 'MIT', 'biology', 'Y');
insert into Apply values (876, 'MIT', 'marine biology', 'N');
insert into Apply values (765, 'Stanford', 'history', 'Y');
insert into Apply values (765, 'Cornell', 'history', 'N');
insert into Apply values (765, 'Cornell', 'psychology', 'Y');
insert into Apply values (543, 'MIT', 'CS', 'N');


select College.* from college left join Apply on  College.CollegeName = Apply.cNAME where cName is Null;

```

COLLEGENAME	STATE	ENROLLMENT
Harvard	MA	50040

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9.Find sID who have only one application.

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SQL Worksheet

Clear Find Actions Save Run

```
insert into Apply values (678, 'Stanford', 'history', 'Y');
insert into Apply values (987, 'Stanford', 'CS', 'Y');
insert into Apply values (987, 'Berkeley', 'CS', 'Y');
insert into Apply values (876, 'Stanford', 'CS', 'N');
insert into Apply values (876, 'MIT', 'biology', 'Y');
insert into Apply values (876, 'MIT', 'marine biology', 'N');
insert into Apply values (765, 'Stanford', 'history', 'Y');
insert into Apply values (765, 'Cornell', 'history', 'N');
insert into Apply values (765, 'Cornell', 'psychology', 'Y');
insert into Apply values (543, 'MIT', 'CS', 'N');


select sID from Apply group by sID having (count(sID)=1);

```

SID
234
543
678

Download CSV

3 rows selected.

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

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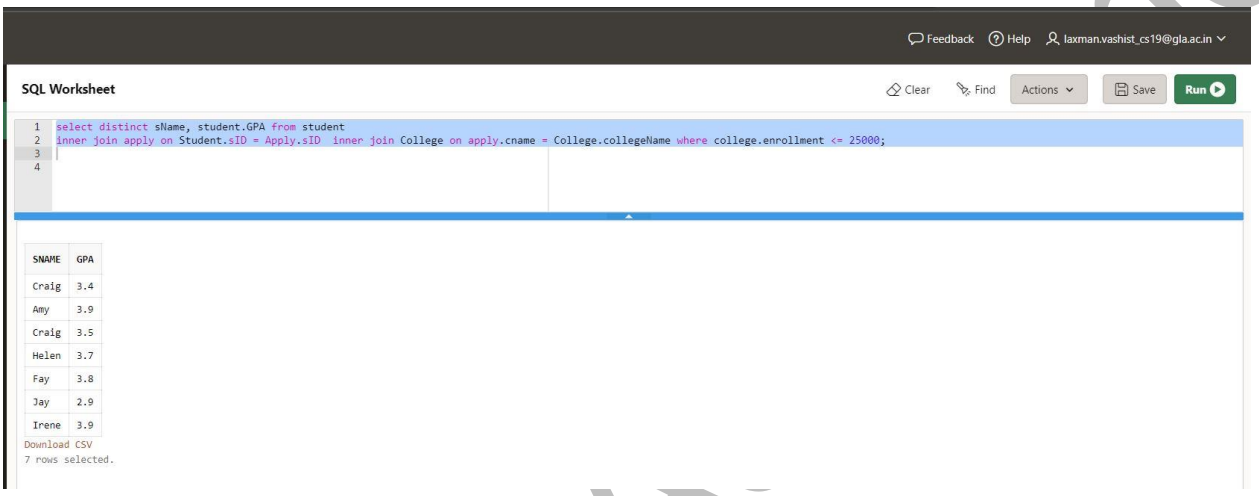

Q11. Find pair of students (sID) having same GPA. (each pair should occur just once in result)

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