

## **DB Assignment-3**

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**Section – EA**

**Roll no – 10**

**Subject-Database Technology**

Q1. Produce a combine table in which each student is combine with every other application.

Live SQL

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SQL Worksheet Clear Find Actions Save Run

```
61  
62 select * from Student cross join Apply  
63
```

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

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

63  
64 `select SID,sName,GPA,cName,Major from Student natural join Apply`  
65

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
876	Irene	3.9	MIT	biology
876	Irene	3.9	MIT	marine biology
987	Helen	3.7	Berkeley	CS
987	Helen	3.7	Stanford	CS

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19 rows selected.

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

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65  
66 `select * from Apply inner join College on Apply.cName = College.collegename where college.state='CA'`  
67

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

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

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SQL Worksheet

Clear

Find

Actions

Save

Run

43

44

45

```

select student.sId,student.sName,student.GPA , apply.cName from Student inner join Apply on Student.sID = Apply.sId where Student.GPA >3.7 and Apply.cName='Stanford';

```

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

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4 rows selected.

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

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SQL Worksheet

Clear

Find

Actions

Save

Run

45

46

47

```

select * from Student inner join Apply on Student.sID = Apply.sID where Apply.major='CS' and Apply.decision = 'N';

```

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

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

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**SQL Worksheet**
Clear
Find
Actions
Save
Run

```

47
48 from Student inner join Apply on Student.sID = Apply.sID inner join College on Apply.cName=College.collegeName where College.state='NY';
49

```

SID	SNAME	GPA	SIZEHS	SID	CNAME	MAJOR	DECISION	COLLEGENAME	STATE	ENROLLMENT
123	Amy	3.9	1000	123	Cornell	EE	Y	Cornell	NY	21000
345	Craig	3.5	500	345	Cornell	bioengineering	N	Cornell	NY	21000
345	Craig	3.5	500	345	Cornell	CS	Y	Cornell	NY	21000
345	Craig	3.5	500	345	Cornell	EE	N	Cornell	NY	21000
765	Jay	2.9	1500	765	Cornell	history	N	Cornell	NY	21000
765	Jay	2.9	1500	765	Cornell	psychology	Y	Cornell	NY	21000

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

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**SQL Worksheet**
Clear
Find
Actions
Save
Run

```

50
51 select * from Student where sID not in (select sID from Apply);
52

```

SID	SNAME	GPA	SIZEHS
567	Edward	2.9	2000
654	Amy	3.9	1000
456	Doris	3.9	1000
789	Gary	3.4	800

Q8- Find college where no student have applied.

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SQL Worksheet
Clear
Find
Actions
Save
Run

```

52
53 select * from College where collegeName not in (select cName from Apply);
54

```

COLLEGENAME	STATE	ENROLLMENT
Harvard	MA	50040

Download CSV

Q-9 Find sID who have only one application.

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SQL Worksheet
Clear
Find
Actions
Save
Run

```

54
55 select sID from Apply group by sId having count(sId) = 1;
56

```

SID
234
543
678

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

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SQL Worksheet Clear Find Actions Save Run

```

57
58 select sName, GPA from Student inner join Apply on Student.sId= Apply.sId inner join College on College.collegeName = Apply.cName where College.enrollment<25000;
59

```

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).

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```

59
60 select s1.sId , s2.sId from Student s1, Student s2 where s1.sId < s2.sId and s1.GPA=s2.GPA;
61

```

SID	SID
123	456
543	789
123	876
456	876
654	876
567	765
123	654
456	654

Q12. Find various majors student applied in at college in state MA.

SQL Worksheet

Clear Find Actions Save Run

```
59  
60 select distinct apply.major from Apply inner join College on Apply.cName = College.collegename where college.state='MA';  
61 |
```

MAJOR
marine biology
biology
bioengineering
CS