Q1. Produce a combine table in which each student is combine with every other application.  
query : select \* from student, apply;

Q2. Give Student ID, name, GPA and name of college and major each student applied to.  
Query : select sid,sname,gpa,cname,major from student natural join apply;

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

select sid, a.cname, major, decision from apply as a join university as u on a.cname = u.cname and state ='CA';

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

select sid,sname,gpa,cname

from student natural join apply where cname = 'Stanford' and gpa>3.7;

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

select sid,sname,gpa,sizeHS

from student natural join apply where major='CS' and Decision = 'N';

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

select sid,sname,gpa,sizeHS,a.cname,major,decision

from student natural join apply as a join university as u on

a.cname=u.cname and state ='NY';

OR

select sid,sname,gpa,sizeHS,a.cname,major,decision

from student natural join apply as a natural join university as u

where state ='NY';

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

select student.sid,sname,gpa,sizehs

from student left outer join apply on student.sid = apply.sid

where apply.sid is null;

Q8. Find college where no student have applied

select u.cname from university as u left outer join apply as a on a.cname=u.cname

where a.cname is null;

Q9. Find sID who have only one application

select s.sid from student s

where 1=(select count(a.sid) from apply a where s.sid=a.sid);

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

select distinct sname , gpa

from student natural join apply natural join university

where enroll>25000;

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

select s1.sid,s2.sid

from student s1 join student s2 on s1.sid!=s2.sid

where s1.sid>s2.sid and s1.gpa = s2.gpa;

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

select sid,a.cname,major

from apply as a join university as u on a.cname=u.cname

where state = 'MA';