**Sql Test2 31061 32606 Spr 20**

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**Question 1.**A “GROUP BY”, which may require WHERE and HAVING conditions.

List all years in which the shuttle flew only one mission.

 launchyear | Missions ß name of second column optional

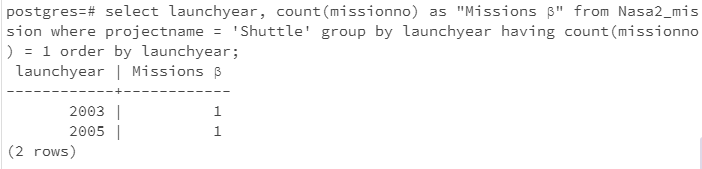
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       2003 |     1

       2005 |     1

(2 rows)

select launchyear, count(missionno) as "Missions β" from Nasa2\_mission where projectname = 'Shuttle' group by launchyear having count(missionno) = 1 order by launchyear;



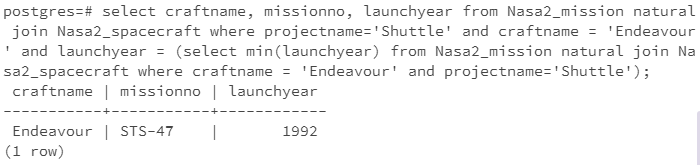
**Question 2.**A simple sub-query

 craftname | missionno | launchyear

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 Endeavour | STS-47    |       1992

select craftname, missionno, launchyear from Nasa2\_mission natural join Nasa2\_spacecraft where projectname='Shuttle' and craftname = 'Endeavour' and launchyear = (select min(launchyear) from Nasa2\_mission natural join Nasa2\_spacecraft where craftname = 'Endeavour' and projectname='Shuttle');



**Question 3.**A join requiring the cross product notation

Order by the astronaut name, and the Apollo mission number.

Hint : Nasa assigned may be used twice, like Nasa2\_assigned as N1 and Nasa2\_assigned as n2

         astroname         | apollo | shuttle

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 Mattingly, Thomas         | 16     | STS-4

 Mattingly, Thomas         | 16     | STS-51C

 Young, John               | 10     | STS-1

 Young, John               | 10     | STS-9

 Young, John               | 16     | STS-1

 Young, John               | 16     | STS-9

(6 rows)

**select astroname, a1.missionno as apollo, a2.missionno as shuttle from Nasa2\_astronaut, Nasa2\_assigned a1, Nasa2\_assigned a2 where Nasa2\_astronaut.astrono = a1.astrono and a1.astrono = a2.astrono and a1.projectname = 'Apollo' and a2.projectname = 'Shuttle' order by astroname, apollo;**

