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CSCI 331

1. Identify all Space Shuttle missions by the Shuttle Challenger. Display the mission start date, end date, launch site, landing site and mission objectives.

```
SELECT mission.missionname AS missionName, spaceship.name AS spaceshipName,
mission.startDate, mission.endDate, mission.launchSight, mission.landingSight, objectives.objective from
objectives, mission, spaceship
WHERE objectives.missionId = mission.Id
AND mission.spaceshipId = spaceship.id
AND spaceship.name LIKE '%Challenger%';
```

100% 40:6

Result Grid Filter Rows: Search Export:

missionName	spaceshipName	startDate	endDate	launchSight	landingSight	objective
STS-6	Space Shuttle Challenger	1983-04-09	1983-04-12	Kennedy Space Center	Pluto	TDRS-A
STS-6	Space Shuttle Challenger	1983-04-09	1983-04-12	Kennedy Space Center	Pluto	Deployment
STS-6	Space Shuttle Challenger	1983-04-09	1983-04-12	Kennedy Space Center	Pluto	Satellites
STS-7	Space Shuttle Challenger	1983-06-18	1983-06-20	Kennedy Space Center	Venus	Communications
STS-7	Space Shuttle Challenger	1983-06-18	1983-06-20	Kennedy Space Center	Venus	Satellites
STS-7	Space Shuttle Challenger	1983-06-18	1983-06-20	Kennedy Space Center	Venus	Deployment
STS-7	Space Shuttle Challenger	1983-06-18	1983-06-20	Kennedy Space Center	Venus	Microgravity
STS-7	Space Shuttle Challenger	1983-06-18	1983-06-20	Kennedy Space Center	Venus	Research
STS-8	Space Shuttle Challenger	1983-08-30	1983-05-09	Kennedy Space Center	Milky Way Galaxy	Communications
STS-8	Space Shuttle Challenger	1983-08-30	1983-05-09	Kennedy Space Center	Milky Way Galaxy	Satellites
STS-8	Space Shuttle Challenger	1983-08-30	1983-05-09	Kennedy Space Center	Milky Way Galaxy	Deployment

2. Identify the missions by astronaut. Display three columns: Astronaut name, number of missions and total mileage. Display one row for each astronaut. Display names in alphabetical order.

```
Select astronauts.firstName, astronauts.lastName, count(mission.id) AS total_missions,
sum(mission.mileage) AS total_mileage FROM mission, astronauts, missions_astro
WHERE missions_astro.missionId = mission.id AND missions_astro.astronautId = astronauts.id
GROUP BY astronauts.id
ORDER BY astronauts.firstName ASC;
```

100% 46:3

Result Grid Filter Rows: Search Export:

firstName	lastName	total_missions	total_mileage
Bob	Dylan	3	1661
Courtney	Dill	1	501
Jeff	Hardy	2	1007
John	Smith	1	542
Koby	White	2	779
Malissa	Shiffman	1	742
Mark	Beltron	2	816
Presh	Takur	1	387
William	lin	1	208
Zack	Hermin	3	1224

3. Identify all missions to Pluto. Display the spaceship name, start and end date of mission and objectives. Order the output by date.

```
SELECT spaceship.name, mission.landingSight, mission.startDate,
mission.endDate, objectives.objective
FROM spaceship, objectives, mission WHERE
mission.id = objectives.missionId AND
spaceship.id = mission.spaceshipId AND
mission.landingSight = 'Pluto'
ORDER BY endDate DESC;
```

100% 23:7

Result Grid Filter Rows: Search Export:

name	landingSight	startDate	endDate	objective
Space Shuttle Challenger	Pluto	1983-04-09	1983-04-12	TDRS-A
Space Shuttle Challenger	Pluto	1983-04-09	1983-04-12	Deployment
Space Shuttle Challenger	Pluto	1983-04-09	1983-04-12	Satellites
Space Shuttle Columbia	Pluto	1982-11-11	1982-11-16	Communications
Space Shuttle Columbia	Pluto	1982-11-11	1982-11-16	Satellites
Space Shuttle Columbia	Pluto	1982-11-11	1982-11-16	Deployment
Space Shuttle Columbia	Pluto	1982-06-27	1982-07-04	Test flight
Space Shuttle Columbia	Pluto	1982-03-28	1982-03-30	Test flight

4. Identify the missions by launch site since 1984. Display four columns: Launch site name, site country, site state and number of missions. Display one row for each launch site. **(I did 1984 because my dates were older then 2000)**

```
SELECT mission.launchSight, mission.landingSight, mission.sightCountry, mission.sightState,
count(mission.launchSight) as num_of_missions FROM
mission WHERE mission.startDate > 19840000
GROUP BY mission.launchSight, mission.landingSight, mission.sightCountry, mission.sightState;
```

100% 94:4

Result Grid Filter Rows: Search Export:

launchSight	landingSight	sightCount...	sightState	num_of_missio...
Kennedy Space Center	Moon	USA	Florida	2

5. Re-assign astronaut Sally Ride from Space Shuttle mission STS-7 to STS-8. Identify the SQL required to implement.

```
UPDATE missions_astro, astronauts, mission SET
missions_astro.missionId = mission.Id WHERE
missions_astro.astronautId = astronauts.id
AND mission.missionName ='STS-8'
AND astronauts.firstName = 'Sally' AND astronauts.lastName = 'Ride';
```

6. Identify astronauts who have a Computer Science degree. Use a nested select to answer this question.

```
SELECT firstName, lastName
FROM (SELECT * FROM
    astronauts WHERE degree = 'Computer Science') AS CS_degrees;
```

100% 62:3

Result Grid Filter Rows: Search Export:

firstName	lastName
Zack	Hermin
Malissa	Shiffman
Presh	Takur

7. Cancel Space Shuttle mission STS-7. Identify the SQL to implement.

```
UPDATE mission SET
status = 'Canceled' WHERE
missionName = 'STS-7';
```

8. Identify astronauts without missions. Display the astronaut name. Use a nested select to answer this question.

```
SELECT DISTINCT firstName, lastName
FROM astronauts, missions_astro WHERE astronauts.Id
NOT IN (SELECT missions_astro.astronautId FROM missions_astro)
```

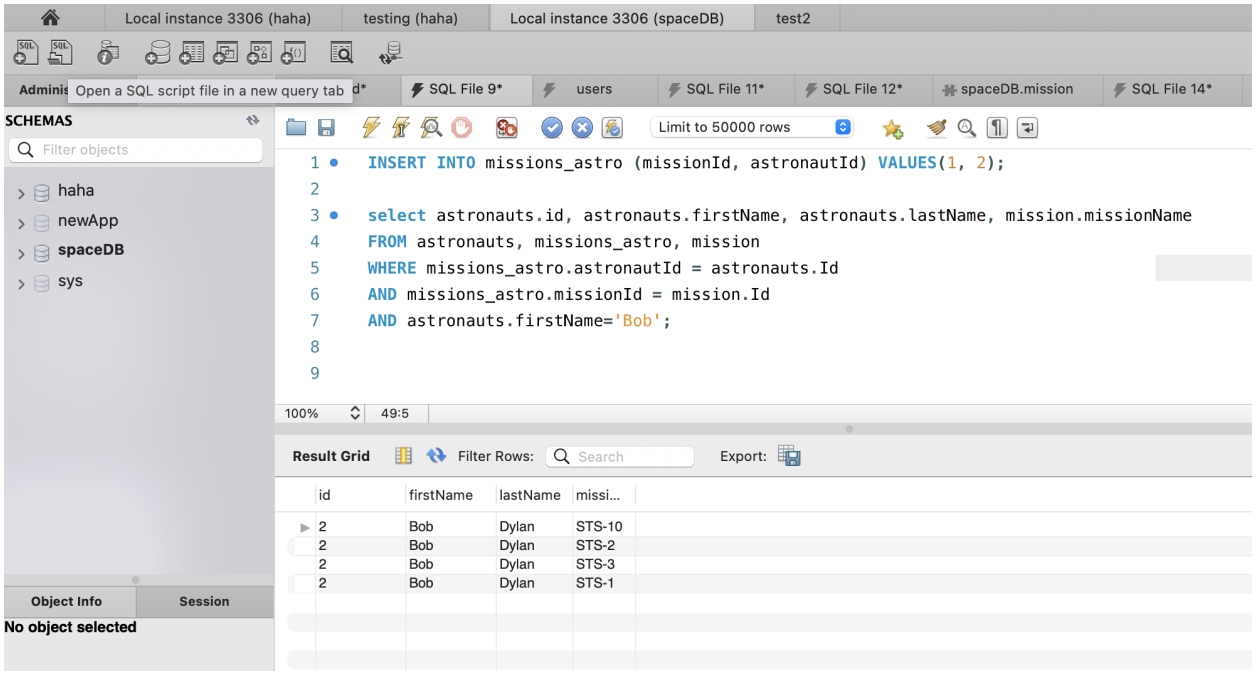
100% 63:3

Result Grid Filter Rows: Search Export:

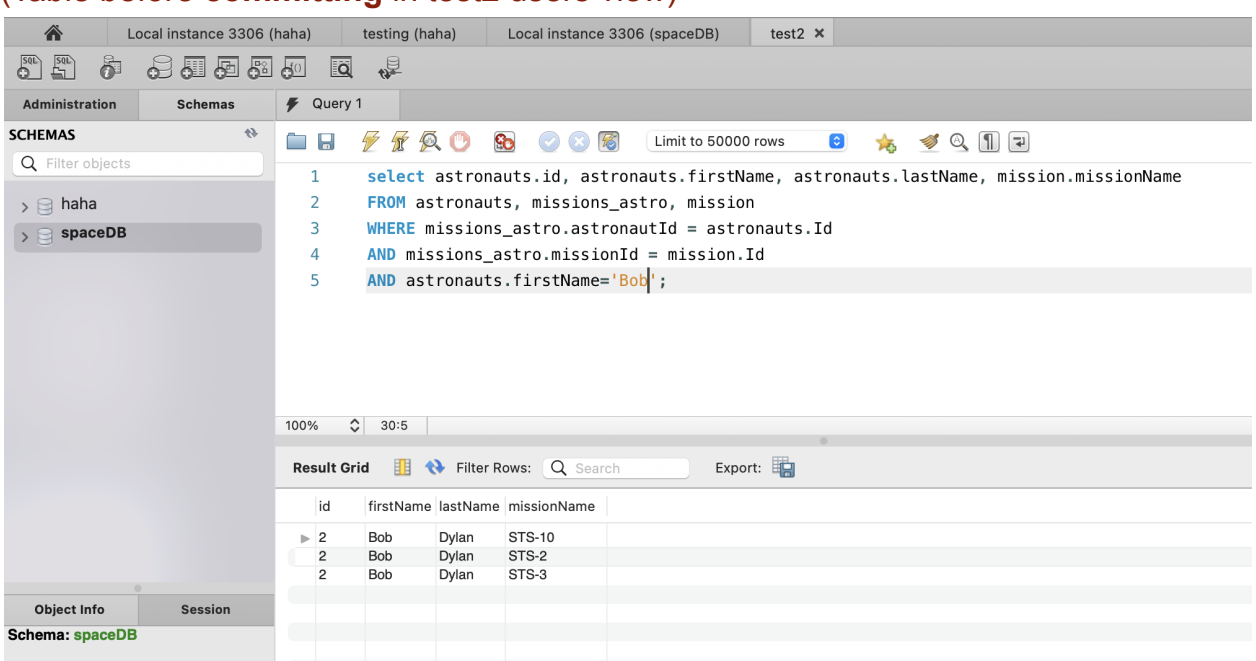
firstName	lastName
Alif	Rahi

9. In one SQL window, reassign Astronaut A to mission 1. Don't commit. In another SQL window, delete mission 1. Don't commit. Explain your results. Resolve the problem.

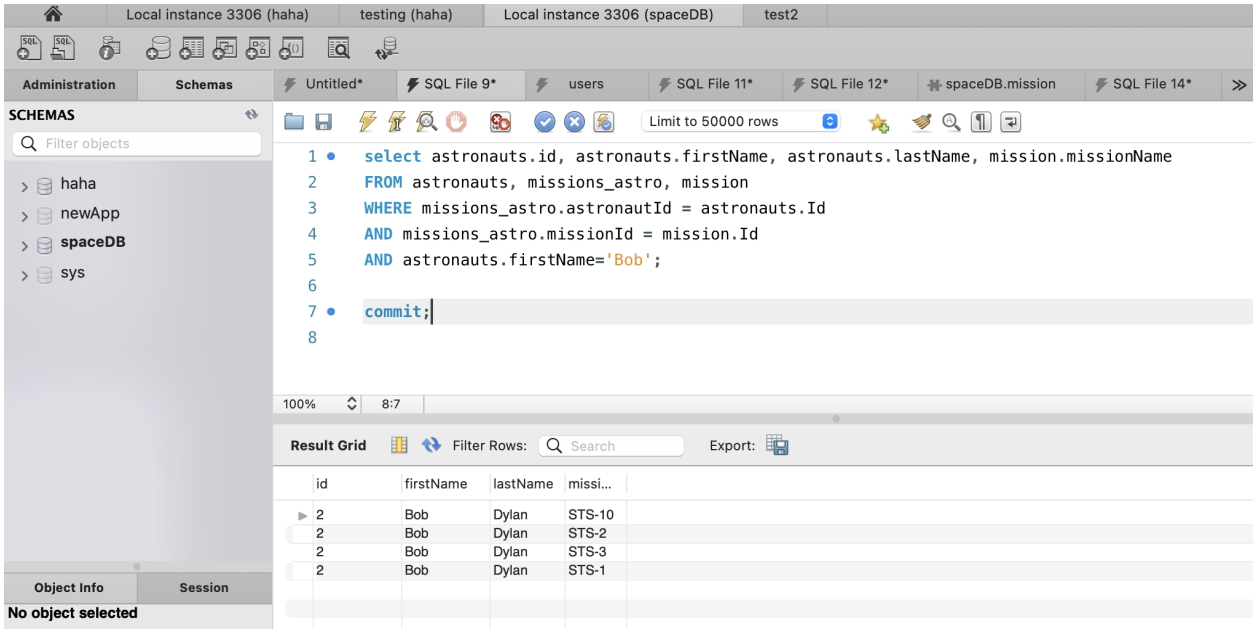
(Table before **committing** in root users view)



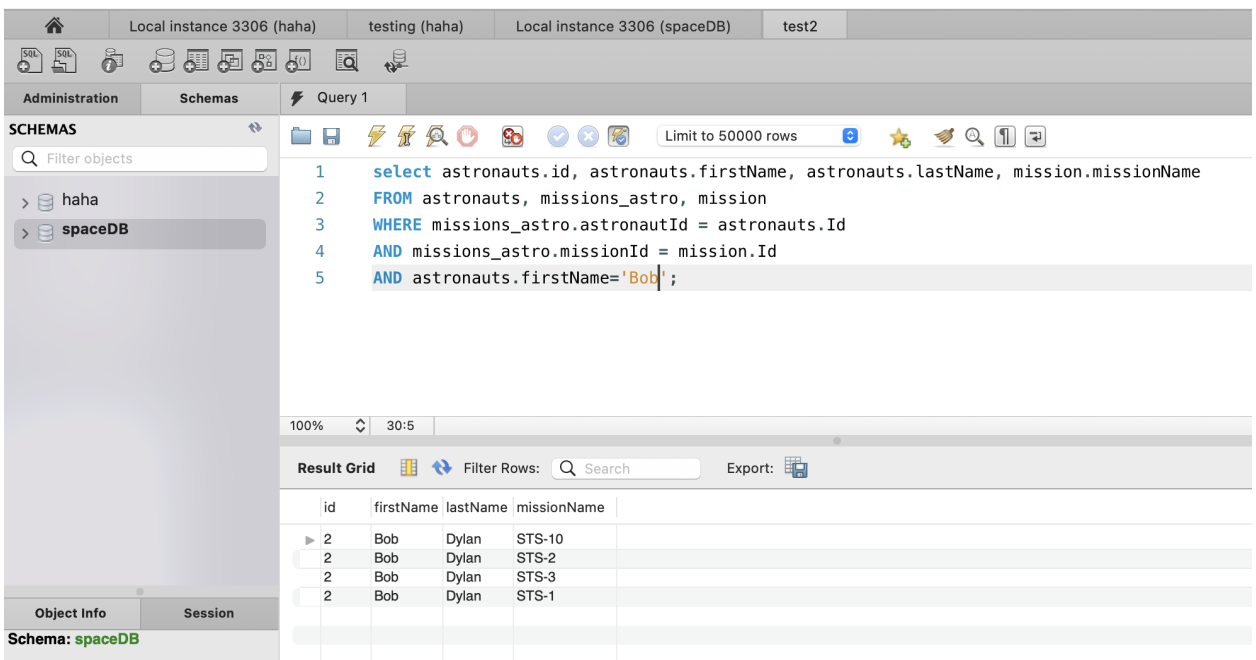
(Table before **committing** in test2 users view)



(Table after **committing** in root users view)



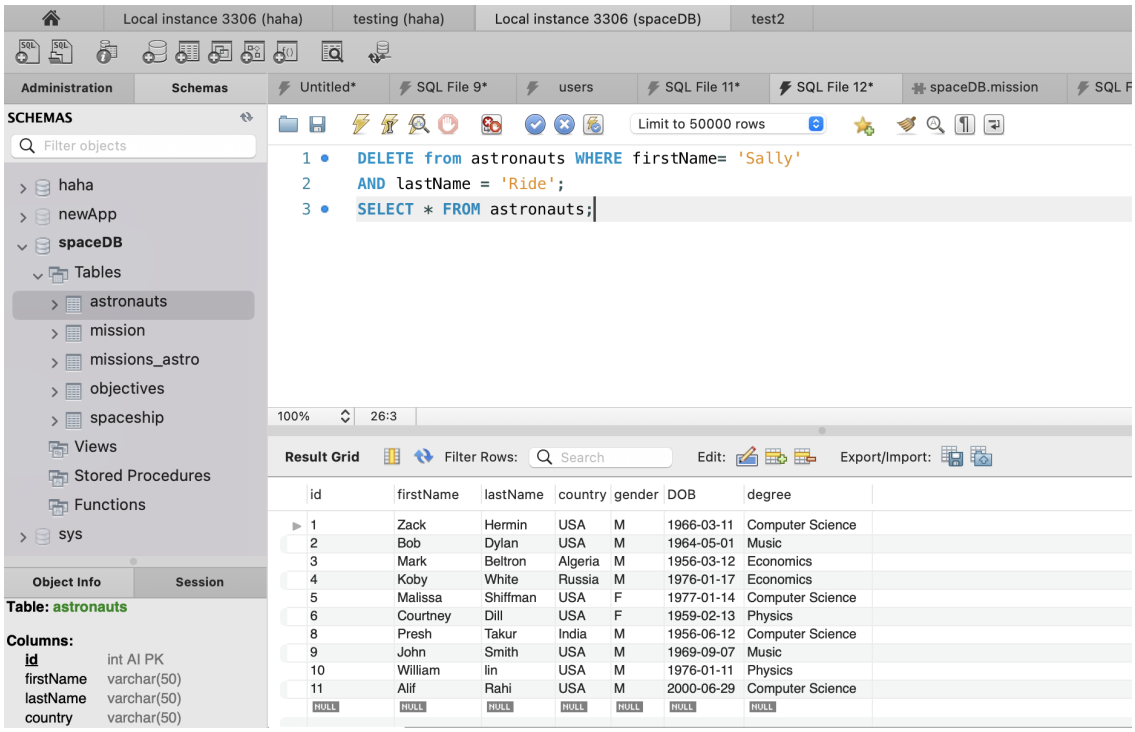
(Table after **committing** in test2 users view)



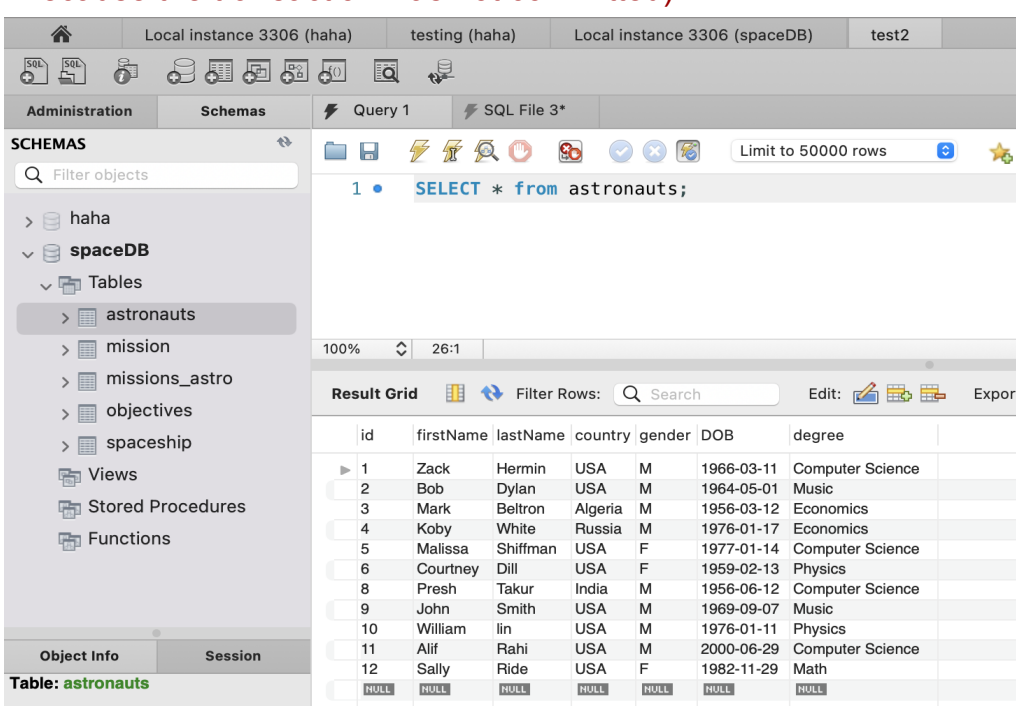
- When I assigned mission 1 to Astronaut ‘Bob’ , other people couldn’t see it and only saw the **committed** changes. In this case, even if i **deleted** or added new entries into my table it won't be shown in the ‘test2’ users account because I didn’t **commit** it from the root user yet. After I commit, you can see the updated table with **mission 1** added.

10. In one SQL window, delete the astronaut Sally Ride. Don't commit. In another SQL window, reassign Sally Ride to a new mission. Don't commit. Explain your results. Resolve the problem.

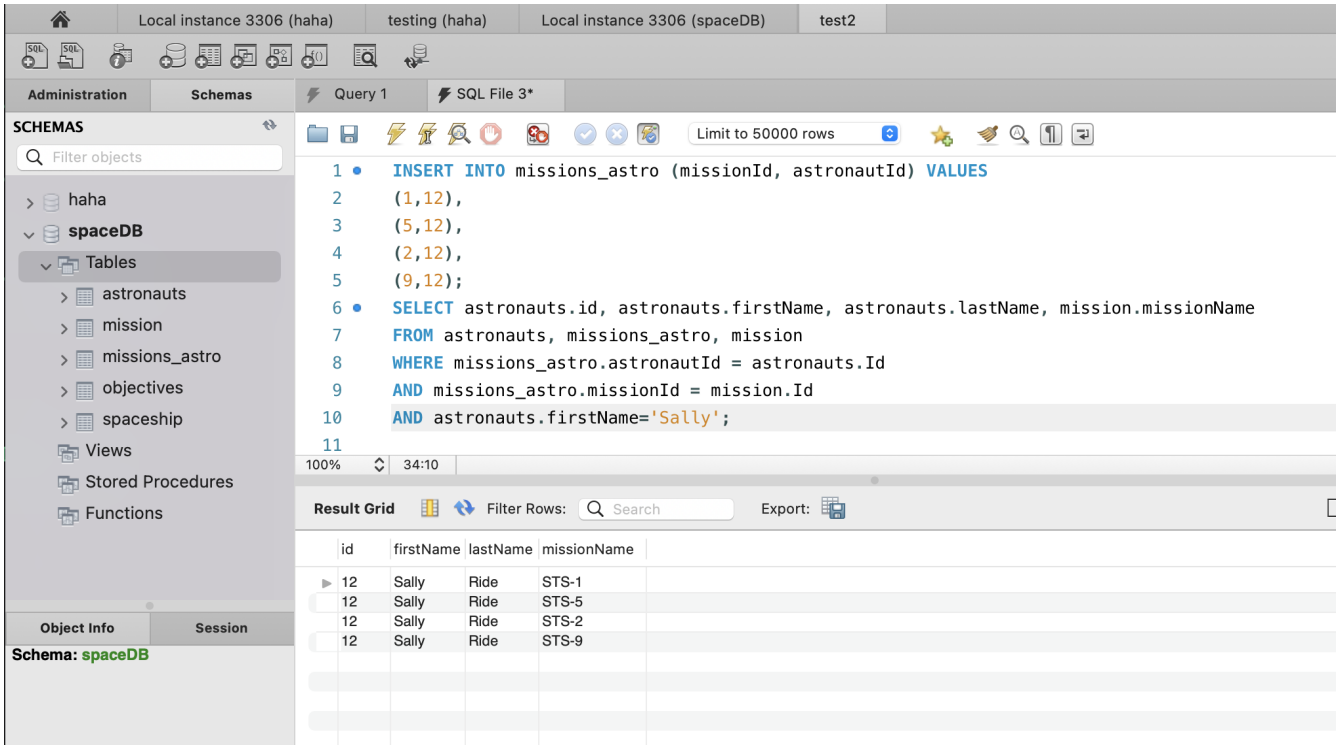
(Here we **delete** Sally from our DB but we don't commit yet)



(We just deleted 'Sally' in the root user account, so why do we still see it on id=12? ..Because the transaction was not committed)



(The ‘test2’ user doesn’t know about Sally getting **deleted** so it is able to **assign** new mission Entries in the mission_astro table for Sally)



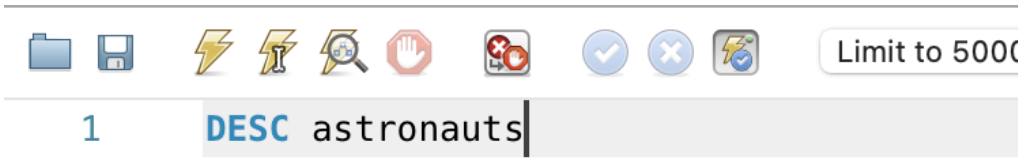
- We can easily resolve this in the root account by doing one of the 2 things:
  - a **Rollback** (If we wan’t Sally back).
  - A **Commit** (If we want to keep Sally deleted).

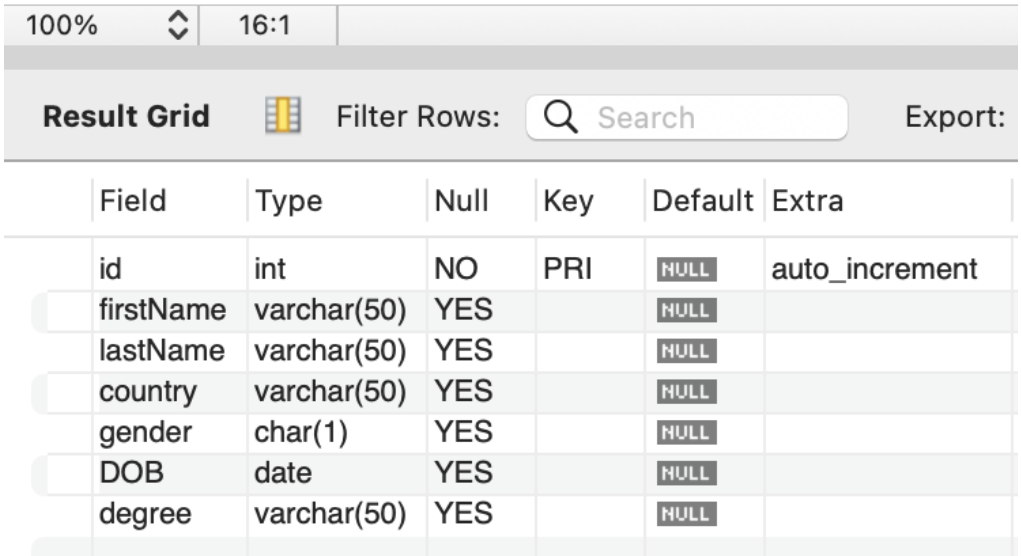
11. In one SQL window, rename the Space Shuttle Enterprise to Voyager. Don't commit. In another SQL window, change the Space Shuttle Enterprise to Lexington. Don't commit. Quit both Oracle sessions. Login to Oracle and display all information for the Space Shuttle Enterprise . Explain your results.

- The Space Shuttle Enterprise stayed as it's pre-committed value and did not change to **Voyager**. This is due to the fact that again, we did not commit and decided to log out. This will automatically **Rollback** to the most recently committed Data.

12)

Table: Astronauts





Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
firstName	varchar(50)	YES		NULL	
lastName	varchar(50)	YES		NULL	
country	varchar(50)	YES		NULL	
gender	char(1)	YES		NULL	
DOB	date	YES		NULL	
degree	varchar(50)	YES		NULL	

Table: Mission

```
1   DESC mission
```

100% 13:1

Result Grid Filter Rows: Search Export:

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
missionName	varchar(30)	YES		NULL	
launchSight	varchar(50)	YES		NULL	
landingSight	varchar(50)	YES		NULL	
duration	bigint	YES		NULL	
spaceshipId	int	YES	MUL	NULL	
sightCountry	varchar(20)	YES		NULL	
sightState	varchar(20)	YES		NULL	
startDate	date	YES		NULL	
endDate	date	YES		NULL	
mileage	int	YES		NULL	
status	varchar(20)	YES		NULL	

Table: mission_astro

```
1   DESC missions_astro
```

100% 20:1

Result Grid Filter Rows: Search Expo

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
missionId	int	YES	MUL	NULL	
astronautId	int	YES	MUL	NULL	

Table: Objectives

```
1   DESC objectives
```

100% 16:1

Result Grid Filter Rows: Search Export:

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
missionId	int	YES	MUL	NULL	
objective	varchar(100)	YES		NULL	

Table: Spaceships

```
1   DESC spaceship
```

100% 15:1

Result Grid Filter Rows: Search Export:

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
name	varchar(50)	YES		NULL	
Fate	varchar(20)	YES		NULL	
Manufacturer	varchar(50)	YES		NULL	