

NOTE: data may not accurate

Complete the following tasks (using postgres database :

- You should create a database named universe

COMMAND: create database universe;

- Be sure to connect to your database with \c universe. Then, you should add tables named galaxy, star, planet, and moon

COMMAND:

```
create table galaxy(  
    galaxy_id serial primary key,  
    name varchar(100) not null unique,  
    number_of_stars_in_billions INT,  
    description TEXT,  
    year_discovered NUMERIC,  
    is_spherical BOOLEAN,  
);  
create table galaxy_types (  
    galaxy_types_id serial primary key,  
    name varchar(100) not null unique,  
    galaxy_id INT not null  
);  
create table star(  
    star_id serial primary key,  
    name varchar(100) not null unique,  
    astronomical_name TEXT,  
    meaning TEXT,  
    apparent_magnitude NUMERIC,  
    absolute_magnitude NUMERIC,  
    distance_light-year INT,  
    galaxy_id INT not null  
);  
create table planet(  
    planet_id serial primary key,  
    name varchar(100) not null unique,  
    distance_from_earth INT,  
    description TEXT,  
    has_life BOOLEAN,  
    star_id INT not null  
);  
create table moon(  
    moon_id serial primary key,  
    name varchar(100) not null unique,  
    year_discovered INT,  
    diameter_km NUMERIC,  
    planet_id INT not null  
);
```

- Each table should have a primary key

- Each primary key should automatically increment

- Each table should have a `name` column
- You should use the `INT` data type for at least two columns that are not a primary or foreign key
- You should use the `NUMERIC` data type at least once
- You should use the `TEXT` data type at least once
- You should use the `BOOLEAN` data type on at least two columns
- Each "star" should have a foreign key that references one of the rows in galaxy
COMMAND: `alter table only public.star add constraint fk foreign key(galaxy_id) references public.galaxy(galaxy_id);`
- Each "planet" should have a foreign key that references one of the rows in star
COMMAND: `alter table only public.planet add constraint fk foreign key(star_id) references public.star(star_id);`
- Each "moon" should have a foreign key that references one of the rows in planet
COMMAND: `alter table only moon add constraint moon_id foreign key(planet_id) references planet(planet_id);`
- Your database should have at least five tables
- Each table should have at least three rows

The `galaxy` and `star` tables should each have at least six rows

COMMAND:

`Insert into galaxy(number_of_stars_in_billions, description, year_discovered, is_spherical, name) values (200, 'The Milky Way is the galaxy that includes the Solar System.', 1610, TRUE, "Milky Way"), (100, 'The Whirlpool Galaxy is an interacting grand-design spiral with Seyfert 2 active galactic nucleus.', 1773, TRUE, 'Whirlpool',), (0.001, 'The Tadpole, also is a disrupted barred spiral galaxy.', 1982, TRUE, 'Tadpole'),...;`

Galaxy

Name	number_of_stars_in_billions	Description	year_discovered	is_spherical
Milky Way	200	The Milky Way is the galaxy that includes the Solar System.	1610	TRUE
Whirlpool	100	The Whirlpool Galaxy is an interacting grand-design spiral with Seyfert 2 active galactic nucleus.	1773	TRUE
Tadpole	0.001	The Tadpole, also is a disrupted barred spiral galaxy.	1982	TRUE
Andromeda	1,000	The Andromeda Galaxy is a barred spiral galaxy is the nearest major galaxy to the Milky Way.	964	TRUE
Messier 49	200	Messier 49 is a giant elliptical galaxy about 56 million light-years away in the equatorial constellation Virgo.	1777	FALSE
Sombrero	100	It is a spiral galaxy located in the constellation Virgo	1781	TRUE
Small Magellanic Cloud	3	Small Magellanic Cloud is a dwarf galaxy near the Milky Way	1519	FALSE

Galaxy types

Name	galaxy_id
Spiral	milky_way_id, whirlpool_id, tadpole_id

Name	galaxy_id
Elliptical	messier_49_id
Irregular	megellanic_cloud_id

Star

Name	astronomical_name	meaning	apparent_magnitude	absolute_magnitude	distance_light_years	galaxy_id
Sirius	Alpha Canis Majoris	scorching	-1.44	1.45	9	1
Canopus	Alpha Carinae	Pilot of the ship	-0.62	-5.53	313	1
Arcturus	Alpha Bootis	Guardian of the bear	-0.05	-0.31	37	1
Rigel Kentaurus	Alpha Centauri	Foot of the centaur	-0.01	4.34	4	1
Vega	Alpha Lyrae	Eagle or vulture	0.03	0.58	25	1
Capella	Alpha Aurigae	Little she-goat	0.08	-0.48	42	1
Rigel	Beta Orionis	Foot	0.18	-6.69	773	1

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- The planet table should have at least 12 rows

name	distance_from_earth_in_mi	Description	has_life	star_id
Mercury	113.65	The smallest planet in our solar system and closest to the Sun —is only slightly larger than Earth's Moon.	FALSE	3
Earth	0	Earth—our home planet—is the only place we know of so far that's inhabited by living things.	TRUE	2

name	distance_from_earth_in_mi	Description	has_life	star_id
Jupiter	480.32	Jupiter is more than twice as massive than the other planets of our solar system combined.	FALSE	4
Uranus	1867.3	Uranus—seventh planet from the Sun—rotates at nearly 90-degree angle from the plane of its orbit.	FALSE	7
Venus	35.838	Venus spins slowly in the opposite direction from most planets.	FALSE	8
Mars	215.01	Mars is a dusty, cold, desert world with a very thin atmosphere.	FALSE	5
Saturn	836.27	Adorned with a dazzling, complex system of icy rings, Saturn is unique in our solar system.	FALSE	2
Neptune	2735.5	Neptune—the eighth and most distant major planet orbiting our Sun—is dark, cold and whipped by supersonic winds.	FALSE	3
Pluto	3141.5	Pluto is a dwarf planet in the Kuiper Belt, a ring of bodies beyond the orbit of Neptune.	FALSE	6
Eris	10122854	Eris is the most massive and second-largest known dwarf planet in the Solar System	FALSE	7

name	distance_from_earth_in_mi	Description	has_life	star_id
Haumea	4644261736.45908	Haumea is a dwarf planet located beyond Neptunes's orbit.	FALSE	4
Ceres	254170222.15263	Ceres is a dwarf planet in the asteroid belt between the orbits of Mars and Jupiter.	FALSE	2

- The moon table should have at least 20 rows

Name	year_discovered	diameter_km	planet_id
Ganymede	1610	5268.2	jupiter_row
Titan	1655	5151.0	saturn_row
Callisto	1610	4816.8	jupiter_row
Io	1610	3636.2	jupiter_row
The Moon		3474.2	earth_row
Europa	1610	3121.4	jupiter_row
Triton	1846	2706.8	neptune_row
Titania	1787	1577.8	uranus_row
Rhea	1672	1529.0	saturn_row
Oberon	1787	1522.8	uranus_row
Iapetus	1671	1469.0	saturn_row
Charon	1978	1207.2	pluto_row
Umbriel	1851	1169.4	uranus_row
Ariel	1851	1157.8	uranus_row
Dione	1684	1125.0	saturn_row
Tethys	1684	1062.6	saturn_row
Dysnomia	2005	700	eris_row

Name	year_discovered	diameter_km	planet_id
Enceladus	1789	504.6	saturn_row
Miranda	1948	471.6	uranus_row
Proteus	1989	420	neptune_row

- Each table should have at least three columns
- The galaxy, star, planet, and moon tables should each have at least five columns
- At least two columns per table should not accept NULL values
- At least one column from each table should be required to be UNIQUE
- All columns named name should be of type VARCHAR
- Each primary key column should follow the naming convention table_name_id. For example, the moon table should have a primary key column named moon_id
- Each foreign key column should have the same name as the column it is referencing