Pycoders - DatabaseModule-Week12

2- 'class4' database olusturun (M). Database silin (M). Ayni database yine olusturun (K)

```
create database class4
```

3- https://www.postgresqltutorial.com/postgresql-sample-database/ adresine gidin ve ER modeli inceleyin. Tablolar arasindaki en az 5 iliskiyi yazin.(Hangi tablolar arasinda ne tur bir iliski var)

1) film ve film_category tablolari, “one to one” iliski
2) film, Language tablolari “one to many” iliski
3) customer, address tablolari, “one to one” iliski
4) city id, address tablolari, “one to one” iliski
5) customer, payment tablolari, “one to many” iliski

4- ER modeldeki tablolardan 3 tanesini M olusturun.

5- ER modeldeki tablolardan 3 tanesini K olusturun

```
-- CREATE TABLE actor (
--         actor_id serial PRIMARY KEY,
--         first_name VARCHAR ( 50 ) Not NULL,
--         last_name VARCHAR ( 50 )  NOT NULL,
--         lasT_update TIMESTAMP
-- );
-- CREATE TABLE film_actor (
--         actor_id serial,
--         film_id serial,
--         last_login TIMESTAMP ,
--         Foreign Key(actor_id) References actor(actor_id),
--         Foreign Key(film_id) References film(film_id)
-- );
CREATE TABLE customer_id (

    customer_id INT NOT NULL,
    store_id INT NOT NULL,
        first_name VARCHAR ( 50 ) Not NULL,
        last_name VARCHAR ( 50 )  NOT NULL,
        email VARCHAR ( 50 )  NOT NULL,
        address_id Int  NOT NULL,
        activebool bool  NOT NULL,
        create_date Timestamp  NOT NULL,
```

last_update TimeStamp,
active bool
);

6- ER modeldeki tablolardan 3 tanesini C olusturun.

```
import psycopg2

conn = psycopg2.connect(
    "dbname='class4' user='postgres' password='Denizli20'")

cur = conn.cursor()

cur.execute("""Create table inventory (
    inventory_id integer Primary key not null,
    film_id integer not null,
    store_id integer not null,
    last_update date not null
    )""")

cur.execute("""Create table stapaymentff (
    payment_id integer Primary key not null,
    customer_id integer not null,
    staff_id integer,
    rental_id integer null,
    amount varchar(40) not null,
    payment_date timestamp not null
    )""")

cur.execute("""Create table staff (
    stafF_id integer,
    first_name varchar(20) not null,
    last_name varchar(20) not null,
    address_id integer null,
    email varchar(40) not null
    )""")

cur.close()
conn.commit()
conn.close()
```

7. Olusturdugunuz 3 tabloya M ile 5 veri girisi yapin
8. Olusturdugunuz tabloya K ile 5 veri girisi yapin

-TABLO 1

```
insert into customer(customer_id, first_name, last_name, last_update)
VALUES
 ('1', 'Veli', 'Kale', '8-4-2021'),
 ('2', 'Mehmet', 'Ates', '3-4-2021'),
 ('3', 'Ayse', 'Kara', '3-4-2021'),
 ('4', 'Fadime', 'Beyaz', '3-4-2021'),
 ('5', 'Hasan', 'Sari', '3-4-2021')
```

-TABLO 2

insert Into inventory (inventory_id, film_id, store_id, last_update) values(1, 2,2,'11/12/2020');
insert Into inventory (inventory_id, film_id, store_id, last_update) values(2, 5,1,'11/12/2020');
insert Into inventory (inventory_id, film_id, store_id, last_update) values(3, 4,5,'11/12/2020');
insert Into inventory (inventory_id, film_id, store_id, last_update) values(4, 3,3,'11/12/2020');
insert Into inventory (inventory_id, film_id, store_id, last_update) values(5, 2,4,'11/12/2020');

9. Olusturdugunuz 3 tabloya C ile 5 veri girisi yapin.

```
import psycopg2
conn = psycopg2.connect("dbname=class4 user=postgres password=Denizli20")
cur = conn.cursor()
cur.execute(
""" insert into language(language_id, name, last_update)
VALUES
 ('1', 'English', '8-4-2021'),
 ('2', 'Spanish', '8-4-2021'),
 ('3', 'Turkish', '8-4-2021'),
 ('4', 'Farsi', '8-4-2021'),
 ('5', 'Russian', '8-4-2021')
"""
)
cur.close()
conn.commit()
conn.close()
```

```
import psycopg2
conn = psycopg2.connect("dbname=class4 user=postgres password=Denizli20")
cur = conn.cursor()
cur.execute(
""" insert into staff(staff_id, first_name, last_name, address_id, email)
VALUES
    ('1', 'Ahmet', 'Kara', 2, 'ahmetkara@test'),
    ('2', 'Fatma', 'tut', 2, 'fatmatut@test'),
    ('3', 'Selim', 'taslik', 2, 'taslik@test'),
    ('4', 'Kerim', 'Hali', 2, 'hali@test'),
    ('5', 'Yavuz', 'ada', 2, 'yavuz@test')
"""
)
cur.close()
conn.commit()
conn.close()
```

10. 3 tablodaki birer veriyi M ile degistirin

11.3 tablodaki birer veriyi K ile degistirin.

```
UPDATE customer
SET first_name = 'Halit'
WHERE customer_id = 1
RETURNING *;
```

```
UPDATE language
SET last_update = '12-12-2021'
WHERE language_id = 2
RETURNING *;
```

```
Update actor set last_name='Arkin' where actor_id=3;
```

12.3 tablodaki birer veriyi K ile degistirin.

```
import psycopg2
conn = psycopg2.connect("dbname=class4 user=postgres password=Denizli20")
cur = conn.cursor()
cur.execute(
""" UPDATE actor
SET last_update = '12-12-2021'
WHERE actor_id = 2
"""
)
cur.close()
conn.commit()
conn.close()
```

13. 3 tablonun son satirini M ile silin.
14. 3 tablonun son satirini K ile silin.

```
DELETE FROM actor
WHERE actor_id = (
 SELECT MAX (actor_id)
 FROM actor
);
```

15. 3 tablonun son satirini C ile silin.

```
import psycopg2
conn = psycopg2.connect("dbname=class4 user=postgres password=Denizli20")
cur = conn.cursor()
cur.execute(
""" DELETE FROM customer
WHERE customer_id = (
 SELECT MAX (customer_id)
 FROM customer
```

```
);"""
)
cur.close()
conn.commit()
```

```
import psycopg2
conn = psycopg2.connect("dbname=class4 user=postgres password=Denizli20")
cur = conn.cursor()
cur.execute(
""" DELETE FROM actor
WHERE actor_id = (
 SELECT MAX (actor_id)
 FROM actor
);"""
)
cur.close()
conn.commit()
```

```
import psycopg2
conn = psycopg2.connect("dbname=class4 user=postgres password=Denizli20")
cur = conn.cursor()
cur.execute(
""" DELETE FROM language
WHERE language_id = (
 SELECT MAX (language_id)
 FROM language
);"""
)
cur.close()
conn.commit()
```

16. 1 tabloyu M ile silin
17. 1 tabloyu K ile silin.

drop table stapaymentff

18. 1 tabloyu C ile silin.

```
import psycopg2
conn = psycopg2.connect("dbname=class4 user=postgres password=Denizli20")
cur = conn.cursor()
cur.execute(
""" drop table film_actor"""
)
cur.close()
conn.commit()
```

19. Kalan tablolardan 1 tanesinin 2 veya 3 sutununu K ile baska bir tablo olarak olusturun.

CREATE TABLE new_table AS
 SELECT (first_name), (last_name) FROM customer;

20. Kalan tablolardan 1 tanesinin 2 veya 3 sutununu C ile baska bir tablo olarak olusturun.

```
import psycopg2
conn = psycopg2.connect("dbname=class4 user=postgres password=Denizli20")
cur = conn.cursor()
cur.execute(
""" CREATE TABLE new_table2 AS
 SELECT (first_name), (last_name) FROM customer;"""
)
cur.close()
conn.commit()
conn.close()
```

21. Tablolardan 1 tanesini M ile truncate edin.
22. Tablolardan 1 tanesini K ile truncate edin

truncate table new_table2

23. Tablolardan 1 tanesini C ile truncate edin.

```
import psycopg2
conn = psycopg2.connect("dbname=class4 user=postgres password=Denizli20")
cur = conn.cursor()
cur.execute(
"""truncate table new_table2"""
)
cur.close()
conn.commit()
conn.close()
```

24. Truncate edilmis tablolari M ile silin

25. 2 tabloyu K ile silin

drop table new_table2
drop table new_table

26. 2 tabloyu C ile silin.

```
import psycopg2
conn = psycopg2.connect("dbname=class4 user=postgres password=Denizli20")
cur = conn.cursor()
cur.execute(
""" drop table staff"""
)
cur.close()
conn.commit()
conn.close()
```

```
import psycopg2
conn = psycopg2.connect("dbname=class4 user=postgres password=Denizli20")
cur = conn.cursor()
cur.execute(
""" drop table inventory"""
```

```
)
cur.close()
conn.commit()
conn.close()
```

27. Elimizde veri olan 1 tablo kalmis olmasi lazim. Bu tabloyu csv olarak bilgisayariniza yukleyin.

28. Postgresql arayuzundeki son tabloyu da K ile silin.

drop table customer

29.Bilgisayarinizdaki csv yi arayuze import edin.

30. Import ettiginiz bu tabloyu C ile silin

```
import psycopg2
conn = psycopg2.connect("dbname=class4 user=postgres password=Denizli20")
cur = conn.cursor()
cur.execute(
""" drop table actor"""
)
cur.close()
conn.commit()
conn.close()
```

31. https://www.postgresqltutorial.com/postgresql-sample-database/ linkindeki ornek DB yi bilgisayariniza indirin ve arayuze yukleyin.

32. DB nizde 15 adet tablo olmasi lazim. Her tabloyu teker teker goruntuleyin ve kolon isimlerine bakarak, 5 tabloda hangi kolonun PK ve FK oldugunu yazin.

Adress tablosu- adress_id PK, city_id FK
Actor tablosu- actor_id PK,
Category tablosu category_id PK
City tablosu ciy_id PK, country_id FK
Country tablosu country_id PK

33. Sorgular? (Asagidaki sorularin cevaplarini ve bu cevabi bulurken kullandiginiz kodlari yazin)

34. Action filmlerinin ortalama suresi ne kadar?

112,7

```
SELECT AVG(length)
FROM film where (description) like '%Action%';
```

35. En cok staff olan store hangisidir?

select store_id from staff Group by store_id order by count(store_id) limit 1

36. 'Gene Willis' adli actorun oynadigi filmlerin ratingi nedir?

```
select rating from film where film_id in (select film_id from film_actor where actor_id in
(select actor_id from actor where first_name='Gene' and last_name='Willis'))
```

37. Aktif customer sayisi nedir?

584

```
select count(*) from customer where active =1
```

38. 'C' harfiyle baslayan filmler hangileridir?

92 film

```
select * from film where title like 'C%'
```

39. 4$ den az odeme yapan musterilerin e-mail adresleri nedir?

```
select email from customer where customer_id in (select customer_id from payment where
amount < 4)
```

40. Moscow'da ikamet eden staff ve customer tablosu? (sadece isim/soyisim sutunu olsun)

```
select first_name, last_name
from customer
where address_id in (select address_id from address where city_id =
(select city_id from city where city='Moscow'))
union select first_name, last_name
from staff
where address_id in (select address_id from address where city_id =
(select city_id from city where city='Moscow'))
```

41. En az kiralanan 5 film hangisidir?

```
select film_id , count(inventory_id)
        from (select i.inventory_id, i.film_id, r.rental_id from inventory as i right join rental
as r on i.inventory_id = r.inventory_id) as foo
        group by film_id order by count(inventory_id) asc limit 5
```

42. 2006 yilinda yayinlanan ingilizce filmler hangileridir?

```
select * from film where language_id in (select language_id from language where
name='English') and release_year = 2006
```