

Stage Va– Construction: Tables in PostgreSQL, Queries in SQL

1. Write and execute SQL data definition language(DDL) commands to create the tables and views in PostgreSQL. Ensure that all constraints are specified.

```
CREATE TABLE users (  
  userID serial PRIMARY KEY,  
  username VARCHAR(250) ,  
  password VARCHAR(250)  
);
```

```
CREATE TABLE administrator (  
  userID INT NOT NULL,  
  permissions BOOLEAN DEFAULT TRUE,  
  FOREIGN KEY(userID)  
    REFERENCES users (userID)  
);
```

```
CREATE TABLE interview (  
  id serial PRIMARY KEY,  
  title VARCHAR(250) NOT NULL,  
  date DATE NOT NULL,  
  audio TEXT NOT NULL,  
  thumbnail TEXT NOT NULL,  
  script TEXT,  
  uID INT NOT NULL,  
  FOREIGN KEY (uID)  
    REFERENCES users (userID)  
);
```

```
CREATE TABLE assets (  
  FiD INT NOT NULL,  
  timestamp VARCHAR(8),  
  hyperlink TEXT,  
  image TEXT,  
  text TEXT,  
  FOREIGN KEY (FiD)  
    REFERENCES interview (id)  
);
```

2. Write scripts / programs that may be required to obtain and format the data.
3. Populate the tables with valid data, with all constraints being enforced.

```
INSERT INTO users (username,password) VALUES ('george123','monke123');
INSERT INTO users (username,password) VALUES ('dwarfhamsters','112233');
INSERT INTO users (username,password) VALUES ('johnnyboy','imcool');
INSERT INTO users (username,password) VALUES ('muffinman','dogsncats');
```

```
INSERT INTO administrator (userID) VALUES (1);
INSERT INTO administrator (userID) VALUES (2);
INSERT INTO administrator (userID) VALUES (3);
```

```
INSERT INTO interview (title, date, audio, thumbnail, uID) VALUES ('Finkle, Herman
Humpy', '2003-10-06', 'https://archive.org/download/JHS10SideA/JHS%2010-%20side%
20A.ogg', 'https://static.timesofisrael.com/njewishnews/uploads/2018/03/TrentonFinkLeSt
oreP-640x400.jpg', 1);
```

```
INSERT INTO interview (title, date, audio, thumbnail, uID) VALUES ('Millner,
Joel', '1995-05-31', 'https://ia601203.us.archive.org/7/items/JHS13SideA/JHS%2013-%20
side%20A.ogg', 'https://i.vimeocdn.com/portfolio_header/24701_402', 1);
```

```
INSERT INTO interview (title, date, audio, thumbnail, uID) VALUES ('Dr. Paul Loser',
'1976-08-12', 'https://ia802908.us.archive.org/0/items/OralHistroyWithDr.PaulLoserSideA/
Oral%20Histroy%20with%20Dr.%20Paul%20Loser%20-%20side%20A.ogg', 'https://bloxi
mages.chicago2.vip.townnews.com/trentonian.com/content/tncms/assets/v3/editorial/f/5
c/f5ce912f-0051-580c-bcca-4abf595605c2/5bbb97a886fa0.image.jpg', 2);
```

```
INSERT INTO interview (title, date, audio, thumbnail, uID) VALUES ('Garfing, Arthur
(JHS16)', '1995-02-07', 'https://ia801207.us.archive.org/18/items/JHS16SideA/JHS%2016
-%20side%20A.ogg', 'https://unitedmeatco.com/wp-content/uploads/2020/12/united.png',
3);
```

```
INSERT INTO assets (FiD, timestamp, hyperlink, image, text) VALUES (5,
'00:02:34', 'https://en.wikipedia.org/wiki/The_Holocaust', 'https://upload.wikimedia.org/wiki
pedia/commons/thumb/3/3b/Selection_on_the_ramp_at_Auschwitz-Birkenau%2C_1944
_%28Auschwitz_Album%29_1a.jpg/435px-Selection_on_the_ramp_at_Auschwitz-Birken
au%2C_1944_%28Auschwitz_Album%29_1a.jpg', '6,500 Jews were killed in 7 days and
Arthur did not know for 2-3 years that his father had been killed.');
```

```
INSERT INTO assets (FiD, timestamp, hyperlink, image, text)
SELECT
    Id,
    '00:02:31',
    'https://en.wikipedia.org/wiki/Nazi_Party', 'https://upload.wikimedia.org/wikipedia/c
ommons/thumb/9/92/Parteiadler_Nationalsozialistische_Deutsche_Arbeiterpartei
```

```

        _%281933%E2%80%931945%29.svg/1280px-Parteiadler_Nationalsozialistische
        _Deutsche_Arbeiterpartei_%281933%E2%80%931945%29.svg.png',
        'Garfing's father left Vilna and was killed by the Germans in 1940'
FROM interview
WHERE title like 'Garfing%';

```

```

INSERT INTO assets (Fid, timestamp, hyperlink, image, text)
SELECT
    Id,
    '00:02:14',
    'https://en.wikipedia.org/wiki/Vilnius', 'https://upload.wikimedia.org/wikipedia/com
    mons/thumb/1/11/Flag_of_Lithuania.svg/188px-Flag_of_Lithuania.svg.png',
    'He left his family in Europe - discusses his Mother's death in 1937 in Vilna,
    capital of Lithuania'
FROM interview
WHERE title like 'Garfing%';

```

```

INSERT INTO assets (Fid, timestamp, hyperlink, image, text)
SELECT
    Id,
    '00:02:34',
    'https://en.wikipedia.org/wiki/The_Holocaust',
    'https://upload.wikimedia.org/wikipedia/commons/thumb/3/3b/Selection_on_the_r
    amp_at_Auschwitz-Birkenau%2C_1944_%28Auschwitz_Album%29_1a.jpg/435p
    x-Selection_on_the_ramp_at_Auschwitz-Birkenau%2C_1944_%28Auschwitz_Al
    bum%29_1a.jpg',
    '6,500 Jews were killed in 7 days and Arthur did not know for 2-3 years that his
    father had been killed.'
FROM interview
WHERE title like 'Garfing%';

```

4. Write SQL data manipulation language(DML) commands that were designed in the previous stages. The queries must be elegant and make effective use of complex query constructs such as subqueries. Execute and test these queries to ensure that they work correctly. Examine the outputs carefully to verify that the queries do not return spurious tuples.

```

CREATE VIEW interview_view AS
SELECT      Fid, timestamp, hyperlink, image, text
FROM        ASSETS
WHERE       Fid = (
    SELECT id
    FROM interview
    WHERE title LIKE 'Garfing%'
);

```

```
CREATE VIEW  admin_info_view AS  
SELECT      users.userID, username  
FROM        USERS  
RIGHT JOIN   ADMINISTRATOR  
ON USERS.userID = ADMINISTRATOR.userID
```

\