DBMS Assignment 3

PESUVariance - Learn, Grow & Challenge Yourself!

Team ID: H1

Names and respective SRN's:
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Semester: 5, Section: H

Simple Queries:

1. **Retrieve the user activities of student user with User ID as S1. (User)**

   SELECT user_id, activity FROM user_profile WHERE user_id = 'S1';

```
pesuvariance=# SELECT user_id, activity FROM user_profile WHERE user_id = 'S1';
 user_id |                    activity
---------+-----------------------------------------------
 S1      | {'Last Log in Time':'16:12:45',               +
         | 'Last Log out Time':'16:17:34',               +
         | No. of quizzes participated:'4',              +
         | No. of competitions participated: '1',        +
         | No. of competitions won: '1',                 +
         | No. of datasets uploaded: '2',                +
         | No. of datasets downloaded: '5',              +
         | No. of posts created: '6',                    +
         | Latest comment: 'I don't think this is right'}+
         |                                               +
         |
(1 row)
```

2. **Show the login date and time for a user with username as anjali. (Login)**

   SELECT login_username, login_date, login_time FROM login WHERE login_username = 'anjali';

```
pesuvariance=# SELECT login_username, login_date, login_time FROM login WHERE login_username = 'anjali';
 login_username | login_date | login_time
----------------+------------+------------
 anjali         | 2021-09-12 | 08:25:30
(1 row)
```

3. **Get all the details of the dataset where the name of the dataset has the word ‘Data’ in it. (Dataset)**

   SELECT dataset_id, dataset_userid, dataset_name, dataset_owner, description, size, dateset_date, dataset_time FROM dataset WHERE dataset_name LIKE '%Data%';

```
pesuvariance=# SELECT dataset_id, dataset_userid, dataset_name, dataset_owner, description, size, dateset_date,
dataset_time FROM dataset WHERE dataset_name LIKE '%Data%';
 dataset_id | dataset_userid |       dataset_name          |   dataset_owner    |                                    description
                                                     | size  | dateset_date | dataset_time
------------+----------------+-----------------------------+--------------------+------------------------------------------------------------------------------------------------
-----------------------------------------------------+-------+--------------+--------------
 D3         | S1             | Dengue Data Philippines     | CC0: Public Domain |
                                                     | 52153 | 2020-09-02   | 03:55:14
 D4         | S3             | Housing Prices Dataset      | UCLA               |
                                                     | 35138 | 2021-01-04   | 09:05:19
 D5         | S4             | Company Acquisitions Data   | Kaggle Source      |
                                                     | 71051 | 2019-05-19   | 12:20:12
 D7         | I2             | GDP Data in USA             | CC0: Public Domain | The purpose of this data set is to allow exploration between various types of data that is commonly collected by the US gove
rnment across the states and the USA as a whole. | 75526 | 2020-10-29   | 06:15:31
(4 rows)
```

4. **Retrieve the Competition ID and number of entries for each hacking competition. (Competitions)**

   SELECT c_competition_id, c_competetion_name, c_no_of_entries FROM competitions WHERE c_competetion_name LIKE '%HACK%';

```
pesuvariance=# SELECT c_competition_id, c_competetion_name, c_no_of_entries FROM competitions WHERE c_competetion_name LIKE '%HACK%';
 c_competition_id | c_competetion_name | c_no_of_entries
------------------+--------------------+-----------------
 C5               | PESHACK            |              12
 C6               | DSHACK             |              12
(2 rows)
```

5. **Get the number of questions in a quiz which has its complexity as hard. (Quiz)**

   SELECT quiz_name, no_questions, complexity FROM quiz WHERE complexity = 'Hard';

```
pesuvariance=# SELECT quiz_name, no_questions, complexity FROM quiz WHERE complexity = 'Hard';
 quiz_name  | no_questions | complexity
------------+--------------+------------
 Python     |            3 | Hard
 SQL        |            3 | Hard
 Python     |            3 | Hard
 Algebra    |            3 | Hard
 Statistics |            3 | Hard
(5 rows)
```

6. **Post owners with the posts in between some time. (Post)**

SELECT post_id, post_title, post_owner, post_desc, p_date FROM post WHERE p_date BETWEEN '2020-04-09' AND '2020-09-30';

```
pesuvariance=# SELECT post_id, post_title, post_owner, post_desc, p_date FROM post WHERE p_date BETWEEN '2020-04-09' AND '2020-09-30';
 post_id |       post_title        | post_owner |                    post_desc                    |   p_date
---------+-------------------------+------------+-------------------------------------------------+------------
 2       | SQL                     | ramya      | How to delete a table in SQL?                   | 2020-04-09
 3       | Machine Learning        | yousha     | How do I stop overfitting?                      | 2020-04-19
 4       | Artificial Intelligence | sravya     | What is reward in reinforcement learning?       | 2020-05-12
 5       | Keras                   | shrikar    | How can I train keras models on a single machine? | 2020-05-18
 6       | R programming           | kruthika   | What are the different data structures in R?     | 2020-06-20
 7       | Statistics              | anjali     | How to calculate range and interquartile range? | 2020-09-30
(6 rows)
```

Complex & Nested Queries:

1. **Get the names of the competitions being participated in by a particular user (Competitions)**

   CREATE TABLE temp_participated_by AS select * from participated_by;

   SELECT * FROM temp_participated_by;

```
pesuvariance=# CREATE TABLE temp_participated_by AS select * from participated_by;
SELECT 8
pesuvariance=#
pesuvariance=# SELECT * FROM temp_participated_by;
 pb_userid | pb_competitionid | participationid
-----------+------------------+-----------------
 S1        | C1               |               1
 S2        | C1               |               2
 S3        | C3               |               3
 S4        | C1               |               4
 S1        | C3               |               5
 S1        | C2               |               6
 S1        | C4               |               7
 S1        | C6               |               8
(8 rows)
```

   ALTER TABLE temp_participated_by RENAME COLUMN pb_userid TO user_id;

   ALTER TABLE temp_participated_by RENAME COLUMN pb_competitionid TO c_competition_id;

   SELECT * FROM temp_participated_by;

```
pesuvariance=#
pesuvariance=# ALTER TABLE temp_participated_by RENAME COLUMN pb_userid TO user_id;
ALTER TABLE
pesuvariance=#
pesuvariance=# ALTER TABLE temp_participated_by RENAME COLUMN pb_competitionid TO c_competition_id;
ALTER TABLE
pesuvariance=#
pesuvariance=# SELECT * FROM temp_participated_by;
 user_id | c_competition_id | participationid
---------+------------------+-----------------
 S1      | C1               |               1
 S2      | C1               |               2
 S3      | C3               |               3
 S4      | C1               |               4
 S1      | C3               |               5
 S1      | C2               |               6
 S1      | C4               |               7
 S1      | C6               |               8
(8 rows)
```

CREATE TABLE temp_participated_by_user AS (SELECT * FROM user_profile NATURAL JOIN temp_participated_by);

CREATE TABLE temp_competitions_participated_by_user AS (SELECT * FROM temp_participated_by_user NATURAL JOIN competitions);

SELECT user_id, name, c_competition_id, c_competetion_name FROM temp_competitions_participated_by_user WHERE user_id = 'S1';

```
pesuvariance=# CREATE TABLE temp_participated_by_user AS (SELECT * FROM user_profile NATURAL JOIN temp_participated_by);
SELECT 8
pesuvariance=#
pesuvariance=# CREATE TABLE temp_competitions_participated_by_user AS (SELECT * FROM temp_participated_by_user NATURAL JOIN competitions);
SELECT 8
pesuvariance=#
pesuvariance=# SELECT user_id, name, c_competition_id, c_competetion_name FROM temp_competitions_participated_by_user WHERE user_id = 'S1';
 user_id |  name   | c_competition_id | c_competetion_name
---------+---------+------------------+--------------------
 S1      | srushti | C1               | Battle
 S1      | srushti | C3               | Kaggle Playground
 S1      | srushti | C2               | ML JOURNEY
 S1      | srushti | C4               | Titanic Competition
 S1      | srushti | C6               | DSHACK
(5 rows)
```

2. **Find the number of downloads and uploads of the datasets by the users who have both uploaded and downloaded.**

CREATE TABLE temp_downloads AS select * from downloads;
ALTER TABLE temp_downloads RENAME COLUMN do_userid TO user_id;
CREATE TABLE temp_user_downloads AS (SELECT * FROM user_profile NATURAL JOIN temp_downloads);
CREATE TABLE temp_user_gb_downloads AS SELECT user_id, COUNT(do_datasetid) AS downloads FROM temp_user_downloads GROUP BY user_id;
select * from temp_user_gb_downloads;

CREATE TABLE temp_uploads AS select * from dataset;
ALTER TABLE temp_uploads RENAME COLUMN dataset_userid TO user_id;
CREATE TABLE temp_user_uploads AS (SELECT * FROM user_profile NATURAL JOIN temp_uploads);
CREATE TABLE temp_user_gb_uploads AS SELECT user_id, COUNT(dataset_id) AS uploads FROM temp_user_uploads GROUP BY user_id;

CREATE TABLE temp_user_downloads_uploads AS (SELECT * FROM (temp_user_gb_downloads NATURAL JOIN temp_user_gb_uploads));
select * from temp_user_downloads_uploads;

```
pesuvariance=# CREATE TABLE temp_downloads AS select * from downloads;
SELECT 8
pesuvariance=# ALTER TABLE temp_downloads RENAME COLUMN do_userid TO user_id;
ALTER TABLE
pesuvariance=# CREATE TABLE temp_user_downloads AS (SELECT * FROM user_profile NATURAL JOIN temp_downloads);
SELECT 8
pesuvariance=# CREATE TABLE temp_user_gb_downloads AS SELECT user_id, COUNT(do_datasetid) AS downloads FROM temp_user_downloads GROUP BY user_id;
SELECT 6
pesuvariance=# select * from temp_user_gb_downloads;
 user_id | downloads
---------+-----------
 S1      |         2
 I3      |         1
 S2      |         1
 I4      |         2
 I2      |         1
 S3      |         1
(6 rows)


pesuvariance=#
pesuvariance=#
pesuvariance=# CREATE TABLE temp_uploads AS select * from dataset;
SELECT 8
pesuvariance=# ALTER TABLE temp_uploads RENAME COLUMN dataset_userid TO user_id;
ALTER TABLE
pesuvariance=# CREATE TABLE temp_user_uploads AS (SELECT * FROM user_profile NATURAL JOIN temp_uploads);
SELECT 8
pesuvariance=# CREATE TABLE temp_user_gb_uploads AS SELECT user_id, COUNT(dataset_id) AS uploads FROM temp_user_uploads GROUP BY user_id;
SELECT 7
pesuvariance=#
pesuvariance=#
pesuvariance=# CREATE TABLE temp_user_downloads_uploads AS (SELECT * FROM (temp_user_gb_downloads NATURAL JOIN temp_user_gb_uploads));
SELECT 5
pesuvariance=# select * from temp_user_downloads_uploads;
 user_id | downloads | uploads
---------+-----------+---------
 I2      |         1 |       1
 I3      |         1 |       1
 S1      |         2 |       2
 S2      |         1 |       1
 S3      |         1 |       1
(5 rows)
```

3. **Obtain the submission IDs of ranks 1,2,3 for a particular competition from the leaderboard.**

CREATE TABLE temp_leaderboard AS (SELECT * FROM leaderboard);
ALTER TABLE temp_leaderboard RENAME COLUMN l_competitionid TO c_competition_id;
CREATE TABLE temp_leaderboard_competition AS (SELECT * FROM (temp_leaderboard NATURAL JOIN competitions));
SELECT c_competition_id, c_competetion_name, submission_id, l_rank FROM temp_leaderboard_competition WHERE c_competition_id = 'C1' AND l_rank IN (1, 2, 3);

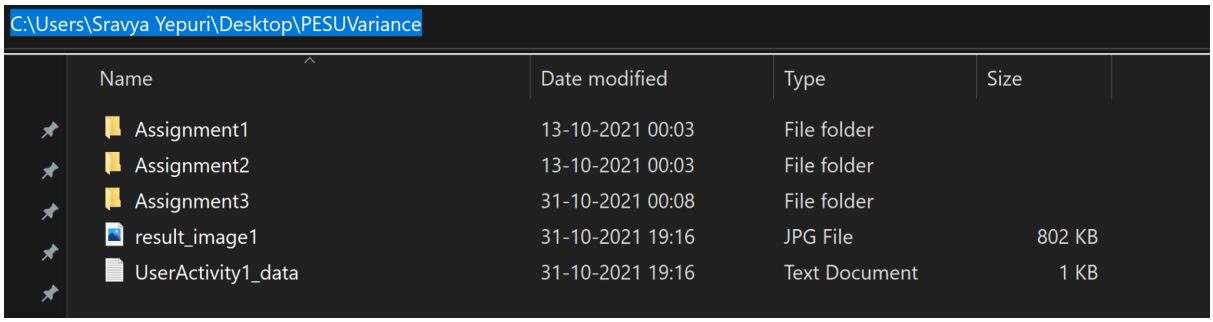
```
pesuvariance=# CREATE TABLE temp_leaderboard AS (SELECT * FROM leaderboard);
SELECT 8
pesuvariance=# ALTER TABLE temp_leaderboard RENAME COLUMN l_competitionid TO c_competition_id;
ALTER TABLE
pesuvariance=# CREATE TABLE temp_leaderboard_competition AS (SELECT * FROM (temp_leaderboard NATURAL JOIN competitions));
SELECT 8
pesuvariance=# SELECT c_competition_id, c_competetion_name, submission_id, l_rank FROM temp_leaderboard_competition WHERE c_competition_id = 'C1' AND l_rank IN (1, 2, 3);
 c_competition_id | c_competetion_name | submission_id | l_rank
------------------+--------------------+---------------+--------
 C1               | Battle             |             1 |      1
 C1               | Battle             |             2 |      2
 C1               | Battle             |             3 |      3
(3 rows)
```

4. **Retrieve the profile picture and user activity of the first user in the database.**

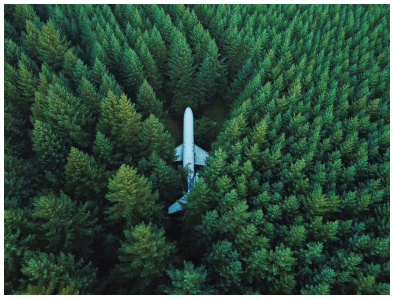
User_retr.py

```python
#!/usr/bin/python
import psycopg2

def read():

    conn = psycopg2.connect(host ="localhost", database = "pesuvariance", user = "postgres", password = "YOUR PASSWORD")
    cur = conn.cursor()

    cur.execute("SELECT * FROM USER_PROFILE;")

    record = cur.fetchone()

    open("C:\\Users\\Sravya Yepuri\\Desktop\\PESUVariance\\result_image1.jpg", 'wb').write(record[5])

    cur.execute("SELECT * FROM USER_PROFILE;")

    f = open("C:/Users/Sravya Yepuri/Desktop/PESUVariance/UserActivity1_data.txt", 'w')

    #for r in cur.fetchall():
    f.write(record[6])

    cur.close()

read()
```

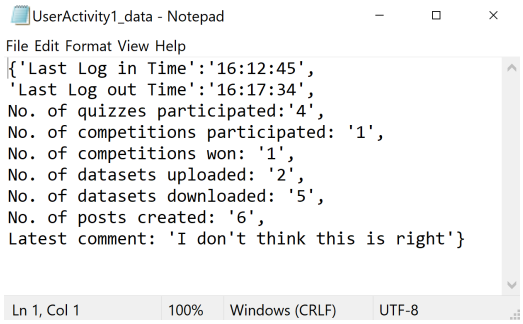
Files location:



Result_image1.jpg



UserActivity1_data.txt



5. **Add comments based on the rank of the teams in the leaderboard using Case..end.**

ALTER TABLE LEADERBOARD ADD COLUMN comments VARCHAR(150);

```
pesuvariance=# select * from leaderboard;
 l_rank | submission_id | execution_speed | grade | test_case_passed | l_competitionid | comments
--------+---------------+-----------------+-------+------------------+-----------------+----------
      1 |             1 |         1234.12 |    10 |               10 | C1              |
      2 |             2 |         1457.89 |     9 |                9 | C1              |
      3 |             3 |         1479.99 |     8 |                8 | C1              |
      4 |             4 |         1500.12 |     7 |                7 | C1              |
      5 |             5 |         1534.62 |     6 |                6 | C1              |
      6 |             6 |         1554.72 |     5 |                5 | C1              |
      7 |             7 |         1621.33 |     4 |                4 | C1              |
      8 |             8 |         1680.55 |     3 |                3 | C1              |
(8 rows)
```

UPDATE leaderboard SET comments = CASE WHEN l_rank <=3 THEN 'Winners' WHEN 5 >= l_rank AND l_rank>3 THEN 'Top Five Finalists' ELSE 'Participants' END;
select * from leaderboard;

```
pesuvariance=# UPDATE leaderboard SET comments = CASE WHEN l_rank <=3 THEN 'Winners' WHEN 5 >= l_rank AND l_rank>3 THEN 'Top Five Finalists' ELSE 'Participants' END;
UPDATE 8
pesuvariance=# select * from leaderboard;
 l_rank | submission_id | execution_speed | grade | test_case_passed | l_competitionid |      comments
--------+---------------+-----------------+-------+------------------+-----------------+--------------------
      1 |             1 |         1234.12 |    10 |               10 | C1              | Winners
      2 |             2 |         1457.89 |     9 |                9 | C1              | Winners
      3 |             3 |         1479.99 |     8 |                8 | C1              | Winners
      4 |             4 |         1500.12 |     7 |                7 | C1              | Top Five Finalists
      5 |             5 |         1534.62 |     6 |                6 | C1              | Top Five Finalists
      6 |             6 |         1554.72 |     5 |                5 | C1              | Participants
      7 |             7 |         1621.33 |     4 |                4 | C1              | Participants
      8 |             8 |         1680.55 |     3 |                3 | C1              | Participants
(8 rows)
```

6. **Display submission ids who have execution time lesser than average.**

CREATE TABLE temp_avg_exspeed AS (SELECT AVG(execution_speed) FROM LEADERBOARD);

SELECT * FROM temp_avg_exspeed;

SELECT submission_id, execution_speed FROM LEADERBOARD WHERE execution_speed <= (SELECT * FROM temp_avg_exspeed);

```
pesuvariance=# CREATE TABLE temp_avg_exspeed AS (SELECT AVG(execution_speed) FROM LEADERBOARD);
SELECT 1
pesuvariance=# SELECT * FROM temp_avg_exspeed;
        avg
--------------------
 1507.917495727539
(1 row)


pesuvariance=# SELECT submission_id, execution_speed FROM LEADERBOARD WHERE execution_speed <= (SELECT * FROM temp_avg_exspeed);
 submission_id | execution_speed
---------------+-----------------
             1 |         1234.12
             2 |         1457.89
             3 |         1479.99
             4 |         1500.12
(4 rows)
```

Access Privileges for users:

1. **Student**

CREATE USER Student WITH PASSWORD ‘student’ createdb;
GRANT SELECT,UPDATE,INSERT ON TABLE DATASET to Student;
GRANT SELECT ON TABLE Quiz to Student;
GRANT SELECT ON TABLE Questions to Student;
GRANT SELECT,UPDATE,INSERT ON TABLE Competitions to Student;
GRANT SELECT ON TABLE Leaderboard to Student;
GRANT SELECT,UPDATE,INSERT,DELETE ON TABLE POST to Student;
GRANT SELECT,UPDATE,INSERT,DELETE ON TABLE COMMENT to Student;

```
pesuvariance=# CREATE USER Student WITH PASSWORD 'student' createdb;
CREATE ROLE
pesuvariance=# GRANT SELECT,UPDATE,INSERT ON TABLE DATASET to Student;
GRANT
pesuvariance=# GRANT SELECT ON TABLE Quiz to Student;
GRANT
pesuvariance=# GRANT SELECT ON TABLE Questions to Student;
GRANT
pesuvariance=# GRANT SELECT,UPDATE,INSERT ON TABLE Competitions to Student;
GRANT
pesuvariance=# GRANT SELECT ON TABLE Leaderboard to Student;
GRANT
pesuvariance=# GRANT SELECT,UPDATE,INSERT,DELETE ON TABLE POST to Student;
GRANT
pesuvariance=# GRANT SELECT,UPDATE,INSERT,DELETE ON TABLE COMMENT to Student;
GRANT
pesuvariance=#
```

Student Accesses:

```
SQL Shell (psql)
Server [localhost]:
Database [postgres]:
Port [5432]:
Username [postgres]: student
Password for user student:
psql (13.4)
WARNING: Console code page (437) differs from Windows code page (1252)
         8-bit characters might not work correctly. See psql reference
         page "Notes for Windows users" for details.
Type "help" for help.

postgres=> \c pesuvariance
You are now connected to database "pesuvariance" as user "student".
pesuvariance=> SELECT * FROM quiz;
 quiz_id | quiz_name  | no_questions | complexity | quiz_date  | quiz_time | total_score
---------+------------+--------------+------------+------------+-----------+-------------
 Q1      | Python     |            3 | Hard       | 2021-07-23 | 02:30:34  |          10
 Q2      | Keras      |            3 | Easy       | 2021-07-23 | 02:30:34  |          10
 Q3      | ML         |            3 |            | 2021-07-23 | 02:30:34  |          10
 Q4      | SQL        |            3 | Hard       | 2021-07-23 | 02:30:34  |          10
 Q5      | Python     |            3 | Hard       | 2021-07-23 | 02:30:34  |          10
 Q6      | R          |            3 | Medium     | 2021-07-23 | 02:30:34  |          10
 Q7      | Algebra    |            3 | Hard       | 2021-07-23 | 02:30:34  |          10
 Q8      | Statistics |            3 | Hard       | 2021-07-23 | 02:30:34  |          10
(8 rows)


pesuvariance=> DELETE FROM leaderboard WHERE l_rank = 1;
ERROR:  permission denied for table leaderboard
pesuvariance=>
```

2. Instructor

CREATE USER Instructor WITH PASSWORD ‘instructor’ createdb;
GRANT SELECT,UPDATE,DELETE,INSERT ON TABLE DATASET to Instructor;
GRANT SELECT,UPDATE,DELETE,INSERT ON TABLE Quiz to Instructor;
GRANT SELECT,UPDATE,DELETE,INSERT ON TABLE Questions to Instructor;
GRANT SELECT,UPDATE,DELETE,INSERT ON TABLE Answers to Instructor;
GRANT SELECT,UPDATE,INSERT,DELETE ON TABLE Competitions to Student;
GRANT SELECT ON TABLE Leaderboard to Instructor;
GRANT SELECT,UPDATE,INSERT,DELETE ON TABLE POST to Instructor;
GRANT SELECT,UPDATE,INSERT,DELETE ON TABLE COMMENT to Instructor;

```
pesuvariance=# CREATE USER Instructor WITH PASSWORD 'instructor' createdb;
CREATE ROLE
pesuvariance=# GRANT SELECT,UPDATE,DELETE,INSERT ON TABLE DATASET to Instructor;
GRANT
pesuvariance=# GRANT SELECT,UPDATE,DELETE,INSERT ON TABLE Quiz to Instructor;
GRANT
pesuvariance=# GRANT SELECT,UPDATE,DELETE,INSERT ON TABLE Questions to Instructor;
GRANT
pesuvariance=# GRANT SELECT,UPDATE,DELETE,INSERT ON TABLE Answers to Instructor;
GRANT
pesuvariance=# GRANT SELECT,UPDATE,INSERT,DELETE ON TABLE Competitions to Student;
GRANT
pesuvariance=# GRANT SELECT ON TABLE Leaderboard to Instructor;
GRANT
pesuvariance=# GRANT SELECT,UPDATE,INSERT,DELETE ON TABLE POST to Instructor;
GRANT
pesuvariance=# GRANT SELECT,UPDATE,INSERT,DELETE ON TABLE COMMENT to Instructor;
GRANT
pesuvariance=#
```

Instructor Accesses:

3. Admin

CREATE USER Admin WITH PASSWORD ‘admin’ createdb;
GRANT ALL PRIVILEGES ON ALL TABLES IN SCHEMA public TO Admin;

```
pesuvariance=# CREATE USER Admin WITH PASSWORD 'admin' createdb;
CREATE ROLE
pesuvariance=# GRANT ALL PRIVILEGES ON ALL TABLES IN SCHEMA public TO Admin;
GRANT
pesuvariance=#
```

Admin accesses:

```
SQL Shell (psql)
Server [localhost]:
Database [postgres]:
Port [5432]:
Username [postgres]: admin
Password for user admin:
psql (13.4)
WARNING: Console code page (437) differs from Windows code page (1252)
         8-bit characters might not work correctly. See psql reference
         page "Notes for Windows users" for details.
Type "help" for help.

postgres=> \c pesuvariance
You are now connected to database "pesuvariance" as user "admin".
pesuvariance=> SELECT * FROM login;
 login_id | login_userid | login_username | login_date | login_time | login_status | password
----------+--------------+----------------+------------+------------+--------------+----------
 1        | S3           | yousha         | 2021-09-12 | 08:25:30   | IN           | xyz123
 2        | S4           | sravya         | 2021-09-12 | 08:25:30   | IN           | xyz123
 3        | I1           | shrikar        | 2021-09-12 | 08:25:30   | IN           | xyz123
 4        | S2           | ramya          | 2021-09-12 | 08:25:30   | IN           | xyz123
 5        | I3           | anjali         | 2021-09-12 | 08:25:30   | IN           | xyz123
 6        | I2           | kruthika       | 2021-09-12 | 08:25:30   | IN           | xyz123
 7        | I4           | anchala        | 2021-09-12 | 08:25:30   | IN           | xyz123
 8        | S1           | srushti        | 2021-09-12 | 08:25:30   | IN           | xyz123
(8 rows)


pesuvariance=> SELECT * FROM hosted_by;
 hb_userid | hb_competitionid
-----------+-----------------
 S1        | C1
 S2        | C2
 S3        | C3
 S4        | C4
 I1        | C5
 I2        | C6
 I3        | C7
 I4        | C8
(8 rows)
```

All users:

```
pesuvariance=# \du
                                   List of roles
 Role name  |                         Attributes                         | Member of
------------+------------------------------------------------------------+-----------
 admin      | Create DB                                                  | {}
 instructor | Create DB                                                  | {}
 postgres   | Superuser, Create role, Create DB, Replication, Bypass RLS | {}
 student    | Create DB                                                  | {}
 u2         | Create DB                                                  | {}
 u3         | Create DB                                                  | {}
 u4         | Create DB                                                  | {}
```

Contribution of each member:
Shrikar Madhu - Simple Queries, Complex Queries, Creating roles and granting permissions.
Sravya Yepuri - Simple Queries, Complex Queries, Creating roles and granting permissions.
Sri Ramya Priya Vedula - Simple Queries, Complex Queries, Creating roles and granting permissions.
Yousha Mahamuni - Simple Queries, Complex Queries, Creating roles and granting permissions.

Time spent to complete assignment 2:
Simple queries - 2 Hours
Complex queries - 4 Hours
Access privileges for users - 3 Hours
Making final report - 2 Hours

Google Drive Link:
https://drive.google.com/drive/folders/1c4edDO3BsWH6p0nfCj5TaMz7a0MN7vdl