PES

UNIVERSITY

PROJECT TITLE :

OLYMPIC

MANAGEMENT DATABASE

DBMS ASSIGNMENT - 3

From Team 10,

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Query statements:

• Simple queries:

1. **Problem**:- **display name, gender and medal of athletes who have won a gold medal.**
   Query:-
   select A.firstname, A.lastname, A.gender, M.medal
   from athlete AS A, win AS M
   where A.playerid = M.playerid AND M.medal = 'Gold';

```
olympics=# select A.firstname,A.lastname,A.gender,M.medal
olympics-# from athlete AS A,win AS M
olympics-# where A.playerid = M.playerid AND M.medal='Gold';
 firstname | lastname | gender | medal
-----------+----------+--------+-------
 Neeraj    | Chopra   | M      | Gold
 Sushil    | Kumar    | M      | Gold
(2 rows)
```

2. **Problem**:- **display name and number of participants of countries such that the latter one is greater than 150.**
   Query:-
   SELECT name, numberofparticipants from country
   where numberofparticipants > 150;

```
olympics=# SELECT name,numberofparticipants from country
olympics-# where numberofparticipants > 150;
    name     | numberofparticipants
-------------+----------------------
 India       |                  156
 USA         |                  201
 China       |                  176
 Japan       |                  196
 SriLanka    |                  190
 SouthKorea  |                  287
(6 rows)
```

3. Problem:- display name of the sports, their duration and date where the sport's duration is between 30 and 50.

Query:-

SELECT sportname,duration,date
FROM schedule
where duration > 30 and duration < 50;

```
olympics=# SELECT sportname,duration,date
olympics-# FROM schedule
olympics-# where duration > 30 and duration < 50;
 sportname | duration |    date
-----------+----------+------------
 Badminton |     38.3 | 2021-07-15
 Cricket   |       42 | 2021-07-13
 BaseBall  |       32 | 2021-07-11
 Wrestling |     38.3 | 2021-07-09
 Golf      |       45 | 2021-07-08
 FootBall  |       38 | 2021-07-07
(6 rows)
```

4. Problem:- display the names of the support staff, their roles and phone numbers.

Query:-

SELECT S.name,S.role,P.phone
FROM supportstaff AS S, phoneno AS P
WHERE S.staffid = P.staffid;

```
olympics=# SELECT S.name,S.role,P.phone
olympics-# FROM supportstaff AS S, phoneno AS P
olympics-# WHERE S.staffid = P. staffid;
   name    |     role     |   phone
-----------+--------------+-----------
 Alex      | Physio       | 987654321
 Theodore  | Host         | 987654320
 Yamato    | Organiser    | 987654322
 Joy       | Physio       | 987654323
 Tabata    | Host         | 987654324
 Inata     | Cameraman    | 987654325
 Michael   | Commentator  | 987654326
 Elizabeth | Maintainence | 987654327
(8 rows)
```

5. **Problem**:- **display the names of facilities available in Tokyo and their capacity.**

Query:-

SELECT name, capacity

FROM facility

WHERE location = 'Tokyo';

```
olympics=# SELECT name,capacity from facility
olympics-# WHERE location = 'Tokyo';
      name       | capacity
-----------------+----------
 RedPlanet       |       25
 HostelEast21    |       56
 RoyalParkHotel  |       87
 TokyoBay        |       22
 TheGateHotel    |       75
(5 rows)
```

• <u>Complex queries:</u>

1. **Problem**:- **display name and gender of athletes who haven't won any medals.**

   Query:-

   SELECT DISTINCT A.firstname, A.lastname, A.gender

   FROM athlete AS A,win

   WHERE A.playerid NOT IN (SELECT playerid from win);

```
olympics=# SELECT DISTINCT A.firstname,A.lastname,A.gender
olympics-# FROM athlete AS A,win
olympics-# WHERE A.playerid NOT IN (SELECT playerid from win);
 firstname | lastname | gender
-----------+----------+--------
 Virat     | Singh    | M
 Neerav    | Paswan   | M
 Suchith   | Shankar  | M
 Aarav     | Bindra   | M
(4 rows)
```

2. Problem:- display name of the sports wherein the no. of participants is greater than 10 and the sport is of an individual type.

Query:-

SELECT
SA.sportname,SA.numberofparticipants,SP.typeofsport
FROM sportactivity AS SA, sport AS SP
WHERE SA.sportname = SP.sportname
AND SP.typeofsport = 'Individual'
AND SA.numberofparticipants > 10;

```
olympics=# SELECT SA.sportname,SA.numberofparticipants,SP.typeofsport
olympics-# FROM sportactivity AS SA, sport AS SP
olympics-# WHERE SA.sportname = SP.sportname
olympics-# AND SP.typeofsport = 'Individual'
olympics-# AND SA.numberofparticipants > 10;
 sportname | numberofparticipants | typeofsport
-----------+----------------------+-------------
 Javelin   |                   15 | Individual
 Javelin   |                   14 | Individual
 Wrestling |                   16 | Individual
 Golf      |                   20 | Individual
(4 rows)
```

3. Problem:- display names of athletes where the coach and the athlete are of the same gender

Query:-

SELECT a.firstname, a.lastname
from athlete as a where a.playerid in (SELECT c.playerid
from coach as c where c.gender = a.gender);

```
olympics=# SELECT a.firstname, a.lastname from athlete as a where a.playerid in (SELECT c.playerid from coach as c where c.gender = a.gender);
 firstname | lastname
-----------+----------
 Neeraj    | Chopra
 Milka     | Singh
 Ravi      | Dahiya
(3 rows)
```

4. Problem:- display the transportation ID's belonging to the type bus or taxi.

Query:-

SELECT TransportID
from transportation
where type in ('Car','Taxi') ;

```
olympics=# SELECT DISTINCT TransportID from transportation where type in ('Car','Taxi');
 transportid
-------------
 501
 502
 504
 505
 506
(5 rows)


olympics=#
```

5. Problem:- display the name of the coach with join on the sport entity where the id of the sport is '100'

Query:-

SELECT firstname, lastname
from (coach join sport on sport = sportname)
where playerid = '100';

```
olympics=# SELECT firstname,lastname from (coach join sport on sport = sportname) where playerid = '100';
 firstname | lastname
-----------+----------
 Chaitanya | Sharma
(1 row)
```

• <u>Nested queries:-</u>

1. **Problem:- display the types of sports played on the date of 2021-07-12.**
   Query:-
   SELECT typeofsport
   from sport
   where sportname in
   (SELECT sportname from schedule where date = '2021-07-12');

```
olympics=# SELECT typeofsport from sport where sportname in (SELECT sportname from schedule where date = '2021-07-12');
 typeofsport
-------------
 Team
(1 row)
```

2. **Problem:- display the name and location of the facility scheduled, given the capacity is greater than 30.**
   Query:-
   SELECT name,location
   from facility
   where facilityid in
   (SELECT facilityid from is_scheduled where transportid in
   (SELECT transportid from transportation where capacity > 30));

```
olympics=# SELECT name,location from facility where facilityid in (SELECT facilityid from is_scheduled where transportid in
olympics(# (SELECT transportid from transportation where capacity>30));
      name      |  location
----------------+----------
 Aman           | Hokaido
 HostelEast21   | Tokyo
 RoyalParkHotel | Tokyo
 TheGateHotel   | Tokyo
(4 rows)
```

3. Problem:- display then name of the coach of an individual sport type.
Query:-
SELECT firstname, lastname
from coach
where sport in (SELECT sportname from sport where typeofsport='Individual');

```
olympics=# SELECT firstname, lastname from coach where sport in(SELECT sportname from sport where typeofsport ='Individual');
 firstname | lastname
-----------+----------
 Chaitanya | Sharma
 Tarpan    | Roy
 Hemanth   | Hegde
 Pranjal   | Kumar
 Deepti    | Yadav
(5 rows)
```

4. Problem:- display the type of sports where the firstname of the coach is 'tarpan'.
Query:-
SELECT typeofsport
from sport
where sportname in (SELECT sport from coach where firstname='Tarpan');

```
olympics=# SELECT typeofsport from sport where sportname in (SELECT sport from coach where firstname='Tarpan');
 typeofsport
-------------
 Individual
(1 row)
```

5. Problem:- **display then names of athlete whose coach is a female.**
   Query:-
   SELECT firstname,lastname
   from athlete
   where playerid in (SELECT playerid from coach where gender='F');

```
olympics=# SELECT firstname,lastname from athlete where playerid in (SELECT playerid from coach where gender='F');
 firstname | lastname
-----------+----------
 Sushil    | Kumar
 Suchith   | Shankar
 Aarav     | Bindra
(3 rows)
```

MULTIPLE USERS WITH DIFFERENT PRIVILEGES

- ## User 1

   Creating username and password…

```
olympics=# create user user1 with password 'user1' createdb;
CREATE ROLE
olympics=# grant select on athlete to user1;
GRANT
olympics=#
```

   And an access to view athlete and his details has been granted….

```
C:\Program Files\PostgreSQL\13\bin>psql -U user1 -d olympics
Password for user user1:
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.
```

The user can view all athletes and his details as seen below.

```
olympics=> SELECT * FROM athlete;
 firstname | lastname  | playerid | gender | age | height | weight | passportno
-----------+-----------+----------+--------+-----+--------+--------+-----------
 PV        | Sindhu    | 100      | F      |  25 | 170.3  | 57.5   |     98765
 Neeraj    | Chopra    | 101      | M      |  23 | 180.5  | 67.5   |     98764
 Lovlina   | Borgohain | 102      | F      |  26 | 171.3  | 55.5   |     98763
 Milka     | Singh     | 103      | M      |  45 | 180.3  | 67.5   |     98762
 PT        | Usha      | 104      | F      |  28 | 176.3  | 53.5   |     98761
 Ravi      | Dahiya    | 105      | M      |  32 | 167.3  | 71.5   |     98760
 Sushil    | Kumar     | 106      | M      |  45 | 187.3  | 77.3   |     98759
 Suchith   | Shankar   | 107      | M      |  31 | 177.9  | 59.8   |     98758
 Aarav     | Bindra    | 108      | M      |  30 | 167.9  | 59.8   |     98757
 Virat     | Singh     | 109      | M      |  39 | 178.9  | 59.8   |     98756
 Neerav    | Paswan    | 110      | M      |  29 | 179.9  | 59.8   |     98755
(11 rows)
```

Access to any other part of the database is denied to this user:-

```
olympics=> SELECT * FROM win;
ERROR:  permission denied for table win
olympics=>
```

- ## **User 2**

Creating username and password…

```
olympics=# create user user2 with password 'user2' createdb;
CREATE ROLE
olympics=# grant select on coach,supportstaff,sportactivity to user2;
GRANT
olympics=#
```

Access to view details of coach, supportstaff and sportactivity is granted.

```
C:\Program Files\PostgreSQL\13\bin>psql -U user2 -d olympics
Password for user user2:
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.
```

```
olympics=> SELECT * FROM coach;
 firstname | lastname | coachid | gender | playerid |   sport    | passportno
-----------+----------+---------+--------+----------+------------+-----------
 Chaitanya | Sharma   | 700     | M      | 100      | Badminton  |    12340
 Tarpan    | Roy      | 701     | M      | 101      | Javelin    |    12341
 Hemanth   | Hegde    | 702     | M      | 102      | Boxing     |    12342
 Lohith    | Kumar    | 703     | M      | 103      | Hockey     |    12343
 Nihal     | Jadhav   | 704     | M      | 104      | BaseBall   |    12344
 Pranjal   | Kumar    | 705     | M      | 105      | Wrestling  |    12345
 Deepti    | Yadav    | 706     | F      | 106      | Golf       |    12346
 Divya     | Sharma   | 707     | F      | 107      | FootBall   |    12347
 Anjali    | Kumar    | 708     | F      | 108      | BasketBall |    12348
(9 rows)
```

```
olympics=> SELECT * FROM win;
ERROR:  permission denied for table win
olympics=>
```

- ## **User 3**

  User3 is granted permission to insert into athlete records…

  ```
  olympics=# create user user3 with password 'user3' createdb;
  CREATE ROLE
  ```

  ```
  olympics=# grant insert on athlete to user3;
  GRANT
  ```

  Inserting a record in the athlete table…

  ```
  olympics=> insert into athlete values('Surya','Kumar','111','M',26,170.3,57.5,98765);
  INSERT 0 1
  ```

- ## **User 4**

  Granting all privileges on all tables to this user…

  ```
  olympics=# create user user4 with password 'user4' createdb;
  CREATE ROLE
  ```

  ```
  olympics=# GRANT ALL PRIVILEGES ON ALL TABLES IN SCHEMA PUBLIC to user4;
  GRANT
  ```

  An example:-

  ```
  olympics=> SELECT * FROM win;
   sportid | playerid | medal
  ---------+----------+--------
   10      | 100      | Silver
   11      | 101      | Gold
   12      | 102      | Bronze
   13      | 103      | Silver
   14      | 104      | Bronze
   15      | 105      | Bronze
   16      | 106      | Gold
  (7 rows)


  olympics=> delete from athlete where playerid='111'
  olympics-> ;
  DELETE 1
  ```

- ## <u>User 5</u>

  User 5 granted with altering the table of supportstaff…

```
olympics=# create user user5 with password 'user5' createdb;
CREATE ROLE
```

```
olympics=# alter table supportstaff owner to user5;
ALTER TABLE
```

<u>Contributions</u>:

Sumukh Bharadwaj	**Complex, nested queries and user privileges**
Sujay Ambekar	**User privileges and Simple, Complex queries**
Bilva Teja R	**Simple queries, User privileges and report making**

Activity	Time Spent
Queries	5 hrs
Multi User privileges	1 hr

Thank You for your patience,
Regards,
Team 10