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CPSC 408-02

Final Project: Olympics Database App

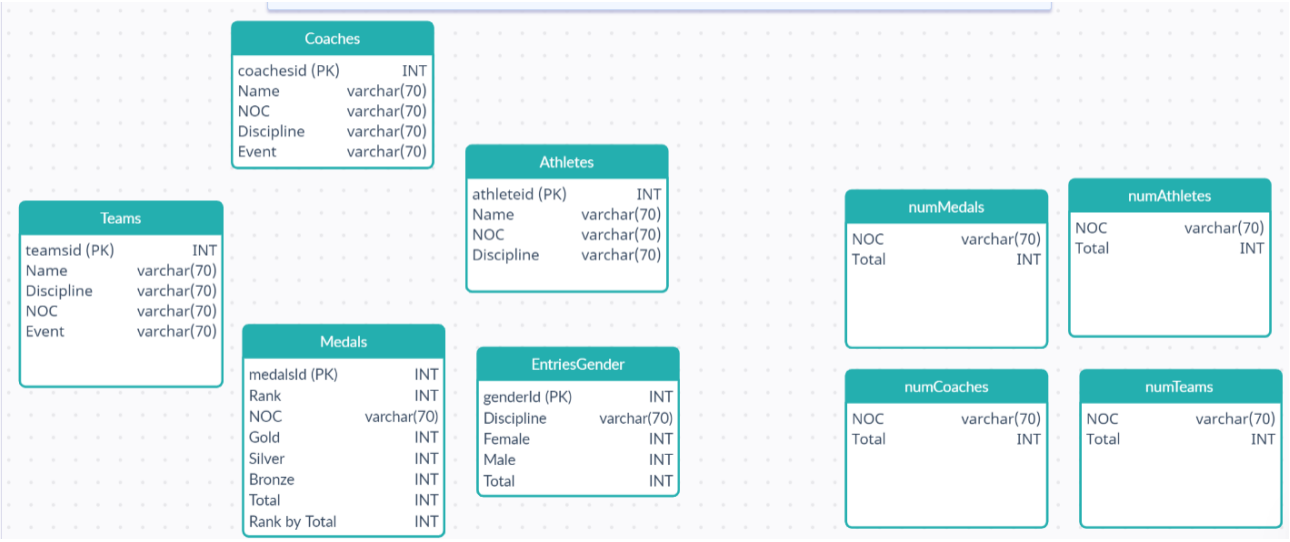
The Olympics 2021 app is aimed towards users who are curious about the specific athletes, countries, or sports in recent olympics and the medals earned from each athlete. This application is created with the idea of making it more convenient for the users to access and manage the information gathered from the tokyo olympics 2021. Having a convenient app which easily visualizes the information helps those who want a quick way in catching up to the recent results for each athlete and learn additional information about the coaches, athletes, and more.

There is a similar application called Olympian Database containing information about results and medalists who participated in the Olympics Games. The user is able to click on specific sections they want to look up, such as nation, games, sports, medals, and results and customize their search to find specific information the user wants to look for. In comparison, the application is much more visually appealing and user friendly with images to help navigate through the app easier. One downside of this app is the slow runtime when searching specific information. Another similar application is the Olympics app which though contains mostly news, podcasts, schedule, and highlights, has a section where the user is able to search up information for teams, and athletes. The application is also much more visually appealing and easy to navigate with tab bars on the bottom of the screen to navigate.

Using the Olympics 2021 dataset I received from Kaggle, I have created an application using python to organize and access the database. Similar to what we have

done in assignment 4 and 7, the front end of the application is using python and the command line. The application gives the user a series of options such as updating the athletes table, adding/deleting records, finding out the total medals earned per country, and searching through the information for each table. To access one of the options, the user can enter the number correlated to the option. Depending on the option, such as searching information from a table, the application prints out the list of names for the user to choose to view/change the record. The back end also uses python and MySql. The MySql is connected to the google cloud platform which saves the database and tables. It is a simple application which connects to MySql and uses queries in python to access, and change the tables depending on what option is chosen from a list of options given to the user. View tables are also created to help searching and running more smoothly.

Here is the schema diagram for my dataset:



I have five tables from the Olympics 2021 dataset, Coaches, Teams, EntriesGender, Medals, and Athletes. Each table has their primary key as an auto incremented ID. Most of the tables, such as Athletes table, Coaches table, and Teams table, contain their name, the discipline that they applied for, and the country that they represent. EntriesGender table shows the number of females and males entered for each discipline in the 2021 olympics. Medals table shows the rank of the country as well as the total of each type of medals earned per country. The last four tables are tables created from Medals, Athletes, Teams, and Coaches holding the Country and the total number of coaches/athletes represented in the Olympics per country. These tables are used later for multiple table joins for searching.

Here are the results for my application:

```
PS C:\Users\julan\OneDrive\Documents\CPSC 408\Assignments\Final(Help)> python app.py
connection made..
Welcome to Olympics Dataset!
Select from the following menu options:
1 Add new athlete
2 Update an athlete
3 Delete an athlete info
4 Search an athlete info
5 Search a Coach info
6 Search how many athletes per Discipline
7 Top Popular Disciplines
8 Top Popular Represented Countries
9 Find Total Gold, silver, and bronze medal earned from country given athlete name
10 Total Athletes, Coaches, Teams, and Medals earned per Country
11 Exit
Enter choice number:
```

This is the main menu for the application, containing a range from adding/deleting records, updating records, searching specific information for each table, and searching popular disciplines or represented countries. The user is able to enter a number to start one of the options. The two options showing the popularity, use view tables containing

group-by clause to easily view selected records from the table. Option number nine, uses sub-query with both athletes and medals table search for the total medals earned for the athlete's country given the athlete's name.

```
Which Athlete information do you want to see?
Enter ID
Enter choice number: 11084
(11085, 'ZYZANSKA Sylwia', 'Poland', 'Archery')
```

This is an example for option number four where the user is able to look into the information of an athlete given the id. From left to right, the id, name, country, and discipline.

```
Enter choice number: 10
NOC, Total Athletes, Total Coaches, Total Teams, Total Medals Earned
('United States of America', 615, 28, 47, 113)
("People's Republic of China", 401, 12, 33, 88)
('Japan', 586, 35, 48, 58)
('Great Britain', 366, 7, 28, 65)
('ROC', 318, 12, 34, 71)
('Australia', 470, 22, 35, 46)
('Netherlands', 274, 10, 27, 36)
('France', 377, 10, 33, 33)
```

This is an example for option number ten where the user is able to look at the total number of athletes, coaches, teams, and total number of medals earned per country for olympics 2021. This is created by joining the four tables previously mentioned, joining together by country. The user is able to enter one of the options infinitely until the user enters "11" which then the application responds in a "Goodbye" and closes.