IT214 Database Management Systems Project

OlympiDB : A Comprehensive Database Management System for the Olympic Games

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1 Objective

To design and implement a database management system for the Olympic Games that can efficiently manage and store data related to athletes, events, venues, and results for different Olympic Games.

2 Description of the project

The Olympic Games is a prestigious international event that brings together athletes from different countries to compete in various sports. With the increasing popularity and complexity of the event, managing and storing data related to athletes, events, venues, and results has become a challenging task. A database management system (DBMS) can help address these challenges by providing an efficient and scalable solution for managing data.

The system will be designed to handle different types of data, including athlete profiles, event schedules, venue information, also the sponsored brands details, media outcomes like viewer description, brand value of player etc.

The schema would also consist of medical information of the players and also the medical teams will be required to submit those reports to the association to decide whether a player is fit and eligible to participate or not. We would also include brands associated with each player participating in the Olympics and those brands can also access the data that shows how many players are ambassadors and are promoting their brand. The schema will be designed to ensure that the data is organized in a structured manner and is easy to retrieve and manipulate.

Once the schema is finalized, the system will be implemented using a relational database management system (RDBMS) in PostgreSQL Server. The database will be created and populated with sample data to test the system's functionality.

The system will include a user interface that allows users to query the database and retrieve information based on specific criteria. Thus this enables the general public to access the relevant data like the number of players participating from different nations and the medal tally of different sports events.

Overall, this DBMS project based on the Olympics will provide a robust and efficient solution for managing data related to athletes, events, venues, and results for different Olympic Games. It will also provide valuable insights into how database management systems can be used to solve real-world problems.

3 Tentative list of Queries

3.1 Olympic Association

1. List numbers of players participating in athletics from different nations.

2. List nations who won the maximum medals in Olympics.

3. List the nations with the highest number of best sports facilities.

3.2 Media Perspective

1. Name the channel on which any particular event is streamed for the longest period of time.

2. List the maximum viewed event.

3. Give the most famous sports personality on the basis of the points earned by them.

3.3 General People

1. List the current sports world record gender wise in top 5 games (most watched).

2. List number of medals won by USA between 2000 and 2020.

3. List the player who won maximum gold medals in Swimming.

3.4 Brands Associated with

1. List the number of players associated with Nike brand in a particular sport.

2. Give count of players associated with a particular brand from different sports and countries.

3. The most paid person from football in women's category.

3.5 Medical Perspective

1. List name of players who are fit to participate in athletics from the USA who have won maximum gold medals.

2. Count the players who were detected dopamine positive and have won a single medal from 2005.

3. List the players who lie in the fit category according to BMI .