

# **DBMS**

## **Assignment - 2 Report**

**TEAM ID : 8**

### **TOPIC : OLYMPIC DATABASE**

#### **TEAM MEMBERS:**

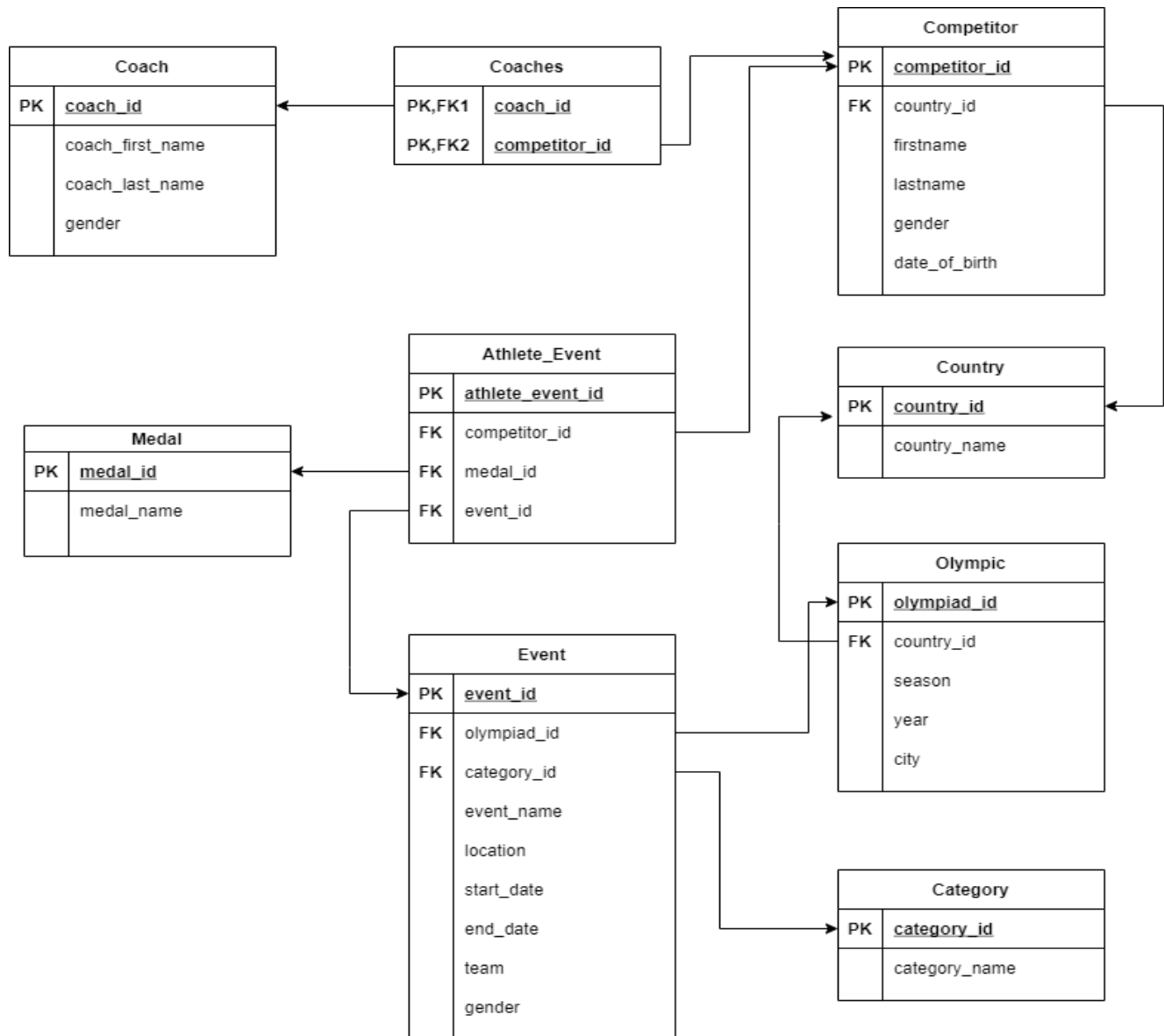
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#### **Changes made in ER diagrams:**

The following changes were made in ER diagram to improve the database design:

1. A Separate entity Coach is created which consists of Coach\_id, Coach\_fname,Coach\_lname and gender
2. A Competitor can have many Coaches and the Coach can train many Competitors

## ER to Relational Schema mapping:



## Implementational Details:

- **DBMS Chosen:**RDBMS
- **Implementation method:**PostgreSQL

## Reasons for choosing RDBMS:

1. **Simple model:** A Relational Database system is the most simple model, as it does not require any complex structuring or querying processes.
2. **Data Accuracy:**In the relational database system, there can be multiple tables related to one another with the use of a primary key and foreign key concepts. This makes the data non-repetitive. There is no chance for duplication of data. Hence the accuracy of data in the relational database is more than any other database system.
3. **Flexibility:** A Relational Database system by itself possesses qualities for leveling up, expanding for bigger lengths, as it is endowed with a bendable structure to accommodate the constantly shifting requirements. This facilitates the increasing incoming amount of data, as well as the update and deletes wherever required. This model consents to the changes made to a database configuration as well, which can be applied without difficulty devoid of crashing the data or the other parts of the database.
4. **Feasible for Future Modifications:** As the relational database system holds records in separate tables based on their categories, it is straightforward to insert, delete or update records that are subjected to the latest requirements. This feature of the relational database model tolerates the newest requirements that are presented by the business. Any number of new or existing tables or columns of data can be inserted or modified depending on the conditions provided, by keeping up with the basic qualities of the relational database management system.

## Reasons for choosing PostgreSQL:

PostgreSQL comes with many features aimed to help developers build applications, administrators to protect data integrity and build fault-tolerant environments, and help you manage your data no matter how big or small the dataset. In addition to being free and open source, PostgreSQL is **highly extensible**.

## SQL Script files:

We have created two .sql files

- 1) create\_tables.sql- This creates all the tables with attributes and constraints
- 2) insert\_values.sql- This is used to insert values into the tables

## Contributions:

1. Prajwal Kamath K : ER to Relational Schema Mapping,create\_tables.sql  
Hours Spent : 3
2. Pranav Rajnish : create\_tables.sql,insert\_values.sql  
Hours Spent : 3
3. Raghavendra L :Report,create\_tables.sql  
Hours Spent : 3