CPSC 304 Milestone 1

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By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and Student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your email address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia

Project Deliverables

2) Brief Project Description

a) The domain is sports data. Our goal is to model the structure of the Olympics, more specifically the Vancouver 2010 Winter Olympics, from how players and events are organized to the magnitude and variety of sports and participating countries.

b) The database models domain entities Athlete, Coach, Sport, Country, Venue, Event, Team, and Federations and their respective attributes. Users will be able to see and understand the relationships between these entities including competing (in event), training under, representing country, located in (venue), a part of (team), and managing federation. For example, users can use the application to find all the medallists for a certain event and see which country they represent.

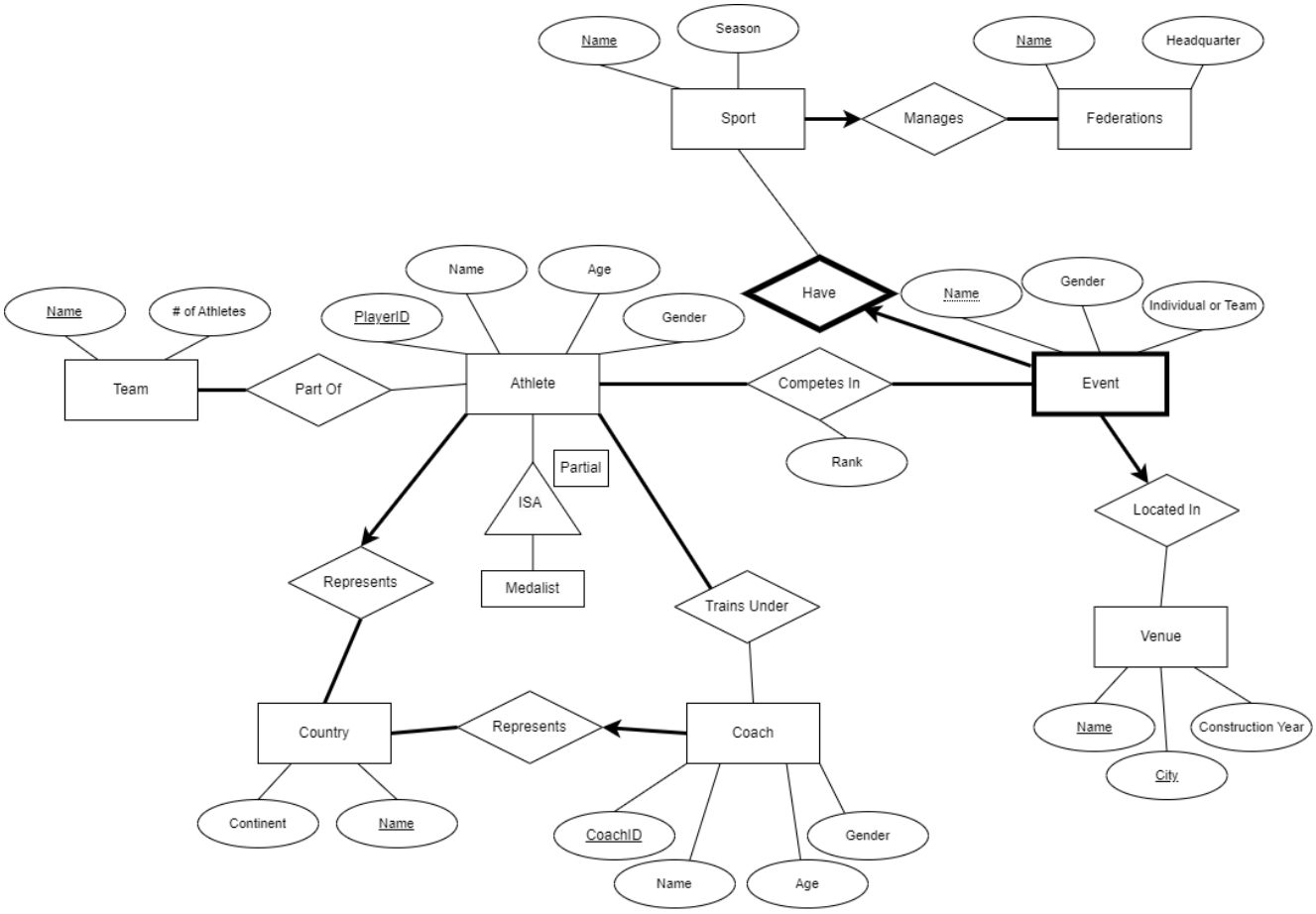
3) Database Specifications

Our application will give users the ability to retrieve data from a database containing data about Olympic events and competitors. Users should be able to query the data in different ways for data analysis purposes. Some use cases may be to order the data based on specific statistical categories (e.g. order participating countries based on descending number of gold medals) and filter the data based on specific conditions. Another possible function would be to output data visualization such as charts and graphs.

4) Description of Application Platform:

Our project will use a MySQL Database. Queries to the database will be in SQL and the application backend will be built using Java. If time permits, the frontend will be built using Javascript frameworks such as React.

5) 2010 Vancouver Winter Olympics Entity-Relationship Diagram



Other Notes:

Brainstorming Entity-Relationships

Entity	**Attributes**
Athlete	- Name - Age - Gender - PlayerID
	ISA medallist
Coach	- Name - Age - Gender - CoachID
Sport	- Name - Season
Country	- Name - Continent
Venue	- Name - City - Construction Year
Event (weak entity of sport?)	- Name (e.g. women's 400m sprint) - Gender - Individual or team
Team	- Name (e.g. Korean National Men's Rowing Team) - # athletes
Federations	- Name - Headquarter Country

Relationships:

1. **Competes In:** Athlete + Sport + event (many to many)
    a. Attributes: rank

2. **Trains Under:** Athlete + Coach (constraint: coach can manage multiple, athlete must have at least one coach)

3. **Represents:** Athlete + Country (constraint: athlete will have only one country, country can have many athletes)
    a. **Participation:** both athletes and countries must all participate in this relationship

4. **Represents:** Coach + Country

5. **Located in:** Venue and Event (constraint: venue has many events but event will have only one venue)

6. **Part of:** Team + Athlete (constraint: team must have a athlete but athlete's can not be part of a team)

7. **Manages:** Federation + Sport (constraint: federation must manage a sport, sport must be managed by a single federation)

Other notes:

- Event is a weak entity of a sport (key is sport name and event name)
- Athlete ISA medalist (partial relationship as athletes do not have to be a medalist)
    - Did not include overlap/disjoint constraints since there is only one ISA relationship