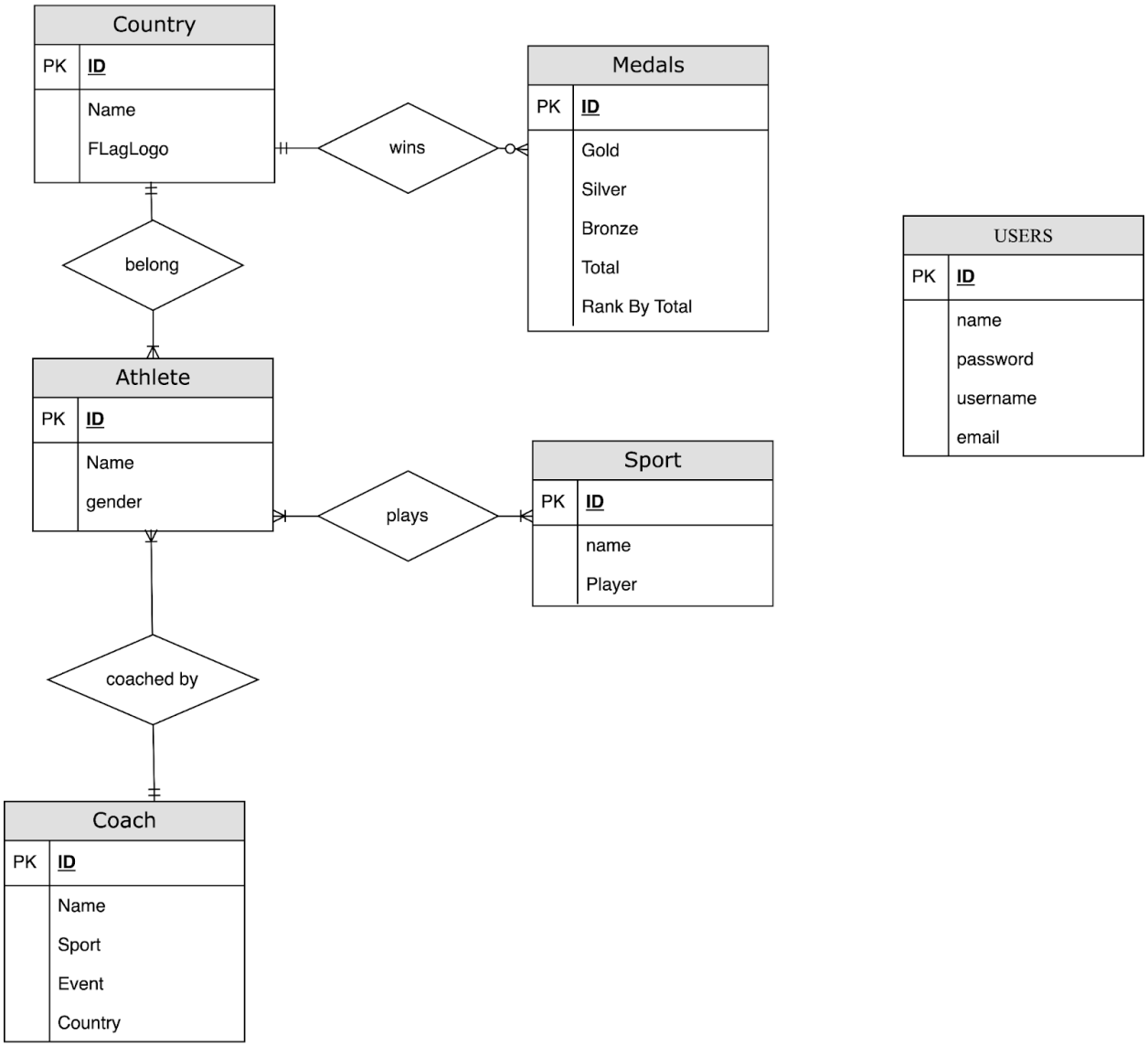
Tokyo Olympics Schedule viewer & Metrics Manager (Olympicstop.com)

ER Diagram



Relational Schema

1. Country (
   ID:INT[PK],
   NAME:VARCHAR(100),
   FlagLogo:BLOB)

2. Athlete (
   ID:INT[PK],
   NAME:VARCHAR(100),
   GENDER:VARCHAR(20),
   COUNTRYID:INT[FK to COUNTRY.ID],
   COACHID:INT[FK to COACH.ID])

3. Coach (
   ID:INT[PK],
   NAME:VARCHAR(100),
   SPORT:VARCHAR(100),
   EVENT:VARCHAR(100),
   COUNTRY:VARCHAR(100))

4. Sport (
   ID:INT[PK],
   name: VARCHAR(100),
   Player:VARCHAR(100))

5. Medals (
   ID:INT[PK],
   GOLD:INT,
   SILVER:INT,
   BRONZE:INT,
   TOTAL:INT,
   COUNTRYID:INT[FK to COUNTRY.ID],
   RANKBYTOTAL:INT)

6. Users (
   ID:INT[PK],
   NAME:VARCHAR(100),
   USERNAME:VARCHAR(100),
   PASSWORD: VARCHAR(20),
   EMAIL:VARCHAR(100))

7. Plays (
   ATHLETEID:INT[PK], SPORTID: INT[PK],
   ATHLETEID:INT[FK to ATHLETE.ID],
   SPORTID:INT[FK to SPORT.ID])

Description and Assumptions of Relations

1. *Country*
    a. Description : This entity stores the country details or nationality of all the participants participating in the Olympics.
    It relates to the athletes who participate representing it and the medals it wins.
    b. Description, Assumptions, Cardinality:
        i. Athletes belong to a Country - A Country can have many athletes participating (1 to N)
        ii. Country wins medals - A Country can win many medals (1 to N)
2. *Athlete*
    a. Description: This entity stores the details of the athletes participating in the olympics.
    It relates to the country as athletes belong to a country, to the sport as athletes participate in some sport, to the coach as they get mentored by coaches.
    b. Description, Assumptions, Cardinality:
        i. Athletes belong to a Country - Many athletes together represent a single country (N to 1)
        ii. Athletes get coached by a couch - A single coach will teach more than 1 athlete in the team (N to 1)
        iii. Athletes plays in sports - Many athletes can play in a single sport or a single athlete can participate in multiple sports (N to N) - Since this is an N to N relationship we make the relationship an entity in Relational Schema as Plays
        iv. It has 2 additional FK's as it is part of a N to 1 relationship (Country & Coach)
3. *Coach*
    a. Description: This entity stores the details of the coaches who train the athletes in the olympics.
    It relates to the athletes as they get coached by coaches.
    b. Description, Assumptions, Cardinality:
        i. Coaches coach athletes - many athletes within one sport get coached by a single coach (1 to N)

4. *Medals*
    a. Description: This entity stores the total number of medals (both total count and by type). It also stores the country's rank by total number of medals.
    It relates to the country which has earned the medals and contributes to that country's ranking.
    b. Description, Assumptions, Cardinality:

i. Country wins Medals - A single country can win many medals but a single medal will be won by 1 country (N to 1)
ii. Medals has a FK of CountryId (which is the primary key of Country).

5. *Sport*
    a. Description: This entity stores the identification number of the sport, its name, and the name of the player(s) representing the country in that event.
    It relates to the athlete entity through the athlete's ID to the sport's ID.
    b. Description, Assumptions, Cardinality:
        i. Many different athletes can compete in multiple sports (N to N)- Since this is an N to N relationship we make the relationship an entity in Relational Schema as Plays
6. *Plays*
    a. Description: This relationship is created as a result of the entities of Athlete and Sports having (N to N) relationships as a single athlete can participate in multiple sports and a single sport can be played by multiple athletes
    b. Description, Assumptions, Cardinality:
        i. Since this relationship is based off a N to N relationship between Athlete and Sports, it only consists of ATHLETEID and SPORTID
        ii. AthleteID and the SportID form the primary key of the Plays relationship
7. *Users*
    a. Description: This entity stores the user logins details used to login to the website.
    b. Description, Assumptions, Cardinality:
        i. It is an independent entity that lets you interact with all the other workflows in the application and stands alone from the other entities