BT542 Midterm

Berat Kaan Çelen

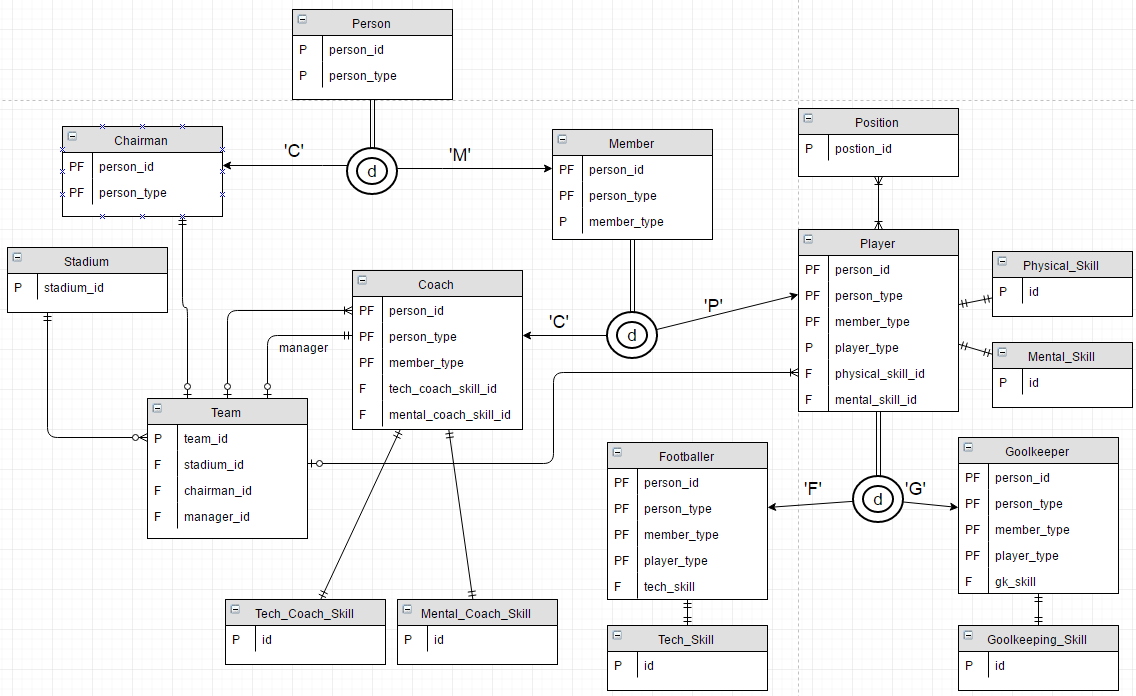
# Football Manager Database Design

## Business Rules

Topic is about football manager video game database design.  
Original video game contains a lot of data,entities and attributes thus i crop a part of game and made design of it.  
Following items show concepts, entities and relations, there is 4 main entity which is **Person**, **Team**, **Stadium and Position**

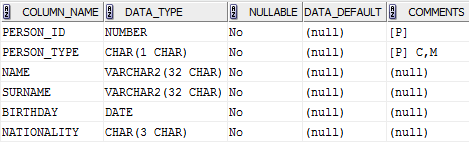
* **Person** (name, surname, birthday, nationality)
  + **Chairman** (wealth)
  + **Member** (contract start date, contract end date, wage)
    - **Coach** (technical coach skills, mental coach skills)
    - **Player** (height, weight, mental skills, physical skills, morale, condition)
      * **Goolkeeper** (goolkeeping skills)
      * **Footballer** (technical skills)
* **Team** (label, name, foundation year, color code 1, color code 2)
* **Stadium** (name, address, capacity, opening date)
* **Position** (label)
* Person nationality should be 3-letter country code
* Chairman wealth must be between [1-20]
* Member wage accepted as yearly wage and dollar as currency
* Player moral must be between [1-5]
* Player condition must be between [1-100]
* A Player must have 1 or more position
* Position labels must be followings
  + GK,DL,DC,DR,DML,DMC,DMR,ML,MC,MR,AML,AMC,AMR,FL,FC,FR,ST
* Team color code 1 and color code 2 must be 6-digit hexadecimal color code but should be keeping in database as text
* All skill attributes must be between [1-20] which is followings
* Technical coach skills contains
  + Attacking
  + Defending
  + Fitness
  + Goolkeepers
  + Man management
* Mental coach skills contains
  + Judging player ability
  + Judging player potantial
  + Level of discipline
  + Motivating
  + Tactical knowledge
* Goolkeeping skills contains
  + Aerial ability
  + Command of area
  + Handling
  + One on ones
  + Reflexes
* Technical skills contains
  + First touch
  + Heading
  + Marking
  + Passing
  + Technique
* Mental skills contains
  + Bravery
  + Creativity
  + Positioning
  + Teamwork
  + Work rate
* Physical skills contains
  + Jumping
  + Natural fitness
  + Pace
  + Stamina
  + Strength
* A team must have 1 chairman, but chairman can be unoccupied
* A team must have 1 manager type of coach, manager can be unoccupied
* A team must have 1 or more players, player can be unoccupied
* A team must have 1 or more coach, coach can be unoccupied
* A team must have 1 stadium, stadium can be unoccupied or host to 1 or more team

## ER Diagrams

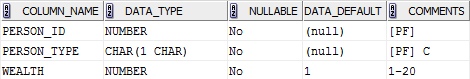


## Logical Database

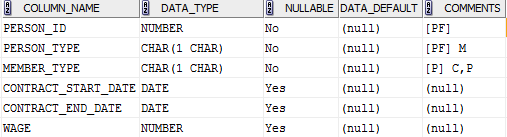
## Person



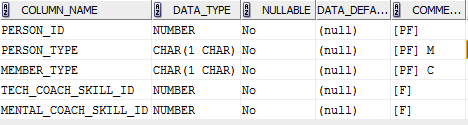
## Chairman



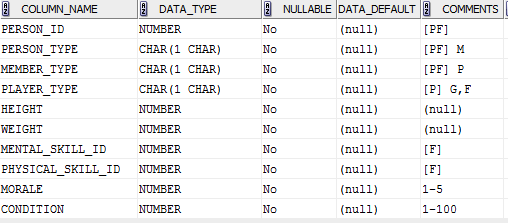
## Member



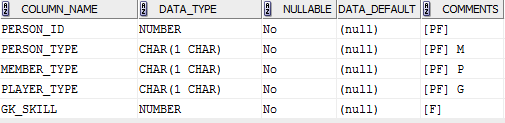
## Coach



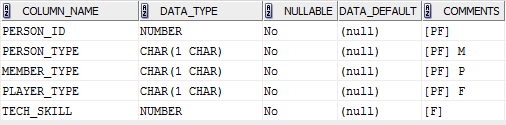
## Player



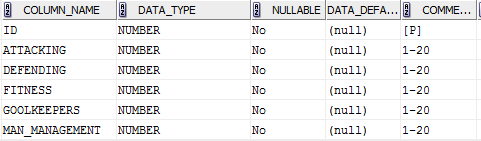
## Goolkeeper



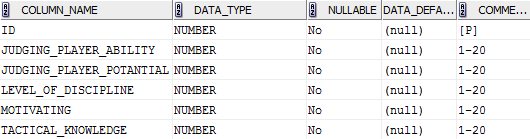
## Footballer



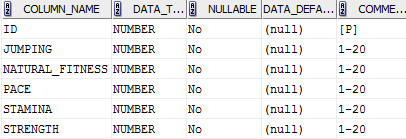
## Tech\_Coach\_Skill



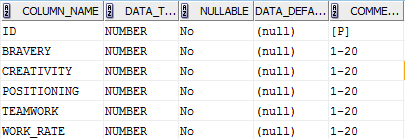
## Mental\_Coach\_Skill



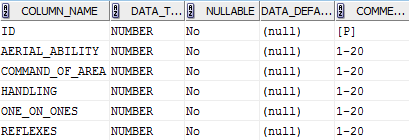
## Physical\_Skill



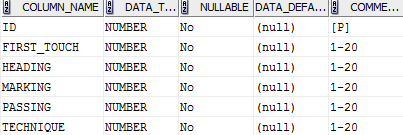
## Mental\_Skill



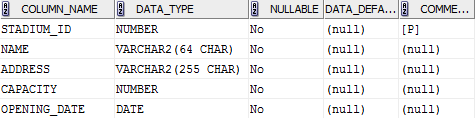
## Goolkeeping\_Skill



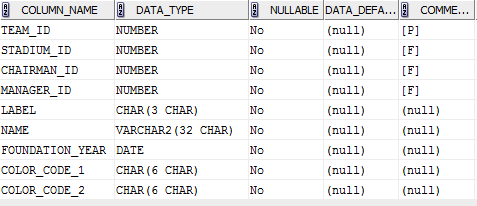
## Tech\_Skill



## Stadium



## Team



## Team\_To\_Coach



## Team\_To\_Player



## Position



## Player\_To\_Position

