BT542 Midterm

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# 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

