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1. Description

This project aims to create a database system to keep track of the various events (Premiere Events, Major Events, Minor Events) of the game League of Legends, created by Riot Games. These events are participated by professional teams from different countries. The game itself is a 5v5 team-based game, and thus each team has 5 players (I will be ignoring substitutes, as they rarely play). Each person chooses one champion from a roster of 130 champions for each match (they may choose a different champion for a different match). In each game, a total of 6 champions are banned from the game by 6 of the 10 players. Each player also plays a specific role (Top, Mid, Support, Bot, Jungle).

In my database system, I will be keeping track of both the individual professional players' scores, individual and average KDA (Kill : Death : Assist ratio), champions picked/banned frequency, etc. I can see this resulting in some interesting game-play analytics.

2. ERD
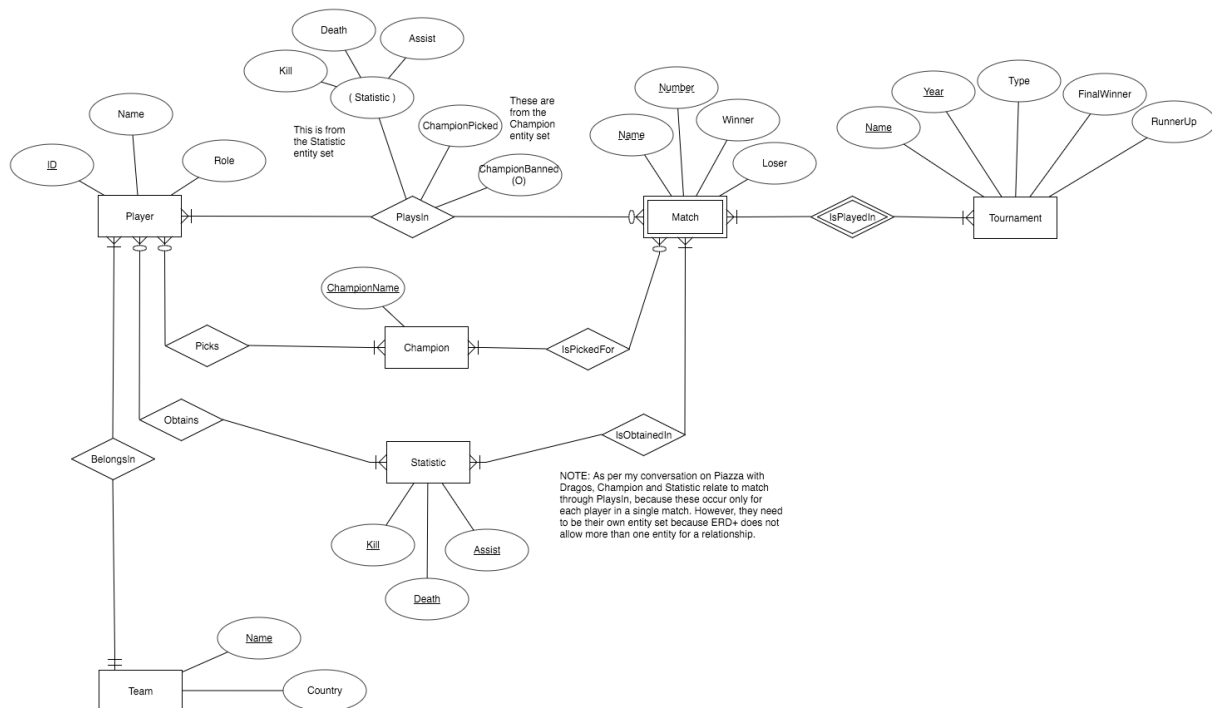
3. Schema

Relations:
Player (<u>ID</u>, PlayerName, Role)
Team(<u>Name</u>, Country)
BelongsIn(<u>PlayerID</u>, TeamName)
  ➢ We can combine this to: Player1(<u>ID</u>, PlayerName, Role, TeamName, Country)

Match(<u>MatchName</u>, <u>MatchNumber</u>, Winner, Loser, <u>TournamentName</u>, <u>TournamentYear</u>)
PlaysIn(<u>PlayerID</u>, Kill, Death, Assist, ChampionPicked, ChampionBanned(O), <u>MatchName</u>, <u>MatchNumber</u>, <u>TournamentName</u>, <u>TournamentYear</u>)

Champion(<u>ChampionName</u>)
Picks(<u>PlayerID</u>, <u>ChampionName</u>)
IsPickedFor(<u>ChampionName</u>, <u>MatchName</u>, <u>MatchNumber</u>, <u>TournamentName</u>, <u>TournamentYear</u>)

Statistic(<u>Kill</u>, <u>Death</u>, <u>Assist</u>)
Obtains(<u>PlayerID</u>, <u>Kill</u>, <u>Death</u>, <u>Assist</u>)
IsObtainedIn(<u>Kill</u>, <u>Death</u>, <u>Assist</u>, <u>MatchName</u>, <u>MatchNumber</u>, <u>TournamentName</u>, <u>TournamentYear</u>)

Tournament(<u>Name</u>, <u>Year</u>, Type, FinalWinner, RunnerUp)

FDs:
PlayerID → PlayerName, PlayerRole, TeamName, Country
MatchName, MatchNumber, TournamentName, TournamentYear → Winner, Loser

PlayerID, MatchName, MatchNumber, TournamentName, TournamentYear → TeamName, Country, Name, Role, Winner, Loser, PickedChampionName, BannedChampionName, Kill, Death, Assist, FinalWinner, RunnerUp
  ➢ *No subset of the first part can functionally determine <u>all</u> of the second part.*

MatchName, MatchNumber, TournamentName, TournamentYear → Winner, Loser, AllPickedChampionNames, AllBannedChampionNames

TournamentName, TournamentYear → Type, FinalWinner, RunnerUp