

## Re-Design: Database Lawn Game Olympics

### Database Technology

For my capstone project, I chose a relational database design and will be using MySQL. This is because of all the data I'll associated with the players, teams and points. To help keep track of all the data I'll need for the players, teams and points, using a relational database will provide split players into teams, keep track of total points and make sure teams aren't repeatedly playing each other. Another appeal to using MySQL is that my database will be fairly small so I can use a database I'm familiar with.

### Database Design

When I first started putting my database design on paper, I was over thinking it a little and thought I'd need a lot more tables to make this work. I initially had another brackets table in there but that didn't seem to fit in the end. I ended up going with five tables and that's what my ER Diagram shows below. The ER Diagram tables are Players, Teams, TotalPoints, Games and GamePoints. The main table is the is Players and it has a primary key of PlayerID. The remaining columns in the table are FirstName, LastName, Gender, Age and SkillLevel. This table has a one-to-many relationship with the Teams table. All of the fields in the tables have to be NOT NULL.

The Teams table has TeamsID as a primary key and this will keep track of the formed teams. TeamsID is also used as a foreign key in both the TotalPoints and GamePoints tables. The Teams table also has TeamName, Player1 and Player2. This table has a one-to-many relationship with the TotalPoints and GamePoints tables.

The TotalPoints table has TotalPointsID as a primary key and this will keep track of the total points. The TotalPoints table also has TeamID(this will keep track of the total points for each team) and TotalPoints.

The Games table has GameID as a primary key and this will keep track of the games being played. GameID is also used as a foreign key in both the GamePoints table. The Games table also has Bags, CoinToss, RedneckGolf and Beersby. This table has a one-to-one relationship with the GamePoints table.

The GamePoints table has GamePointsID as a primary key and this will keep track of each games individual points. The GamePoints table also has GameID(this will keep track of each games points), TeamID(this will keep track of the games points for each team) and GamePoints.

**Database Update:** The feedback I received for my Database was fairly minor. The professor recommended I update the Primary Key in my Players table to PlayerID rather than NameID. This change seemed like a good idea and more appropriate to use so I decided to take the professors advice and make the change.

**Stretch Goal:** I added another game called Beersby to the Games table. Eventually, I would like to get back up to 5 games. Adding another game seemed like the obvious choice since I think the addition wouldn't be too difficult to incorporate.

