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## **Tournament Bracket Builder/Analyser**

### **Project Summary**

We plan to build a tournament database that stores information about a tournament, the teams, matchups, players, and locations. This data would then be used to find tournaments that have happened in the past. If time allows we will also allow the user to build their own. Each tournament would have a corresponding set of matchups between two teams. In addition to the two teams matchups would have a round, a date, location and team scores. The teams would consist of names, mascots; Players would have a team, name and number and locations would consist of a venue, and the corresponding geographic information for that venue.

Our intended user is any fans of sports and tournament fans in general. A user could lookup information about previous tournaments by year, and then lookup additional information regarding that tournament such as teams, matchups, venues etc. Additionally, users could create their own tournaments and save them to the database.

### **Technical Details**

We plan on using C# for most code implementation. We also plan on using the Entity Framework for our database interactions. The project will be built in ASP.NET MVC and will behave as a web application.

### **Relations**

#### **Relation Notation**

**Relation(KeyAttribute1, KeyAttribute2, NonKeyAttribute1, NonKeyAttribute2)**

Tournament(TournamentID, Sport, Name, StartingDate, EndingDate)

Player(PK PlayerID, TeamID, FirstName, LastName, Number)

Team(TeamID, LocationID, Name)

Match(MatchID, TournamentID, Team1ID, Team2ID, LocationID, Round, Date, Team1Score, Team2Score)

Location(LocationID, Venue, City, StateProvince)

## Data Interactions

Tournament(SELECT, INSERT)

Match(SELECT, INSERT, UPDATE)

Location(SELECT)

Player(SELECT)

Team(SELECT)

## Initial Database Design

