**American University of Beirut**

***Department of Computer Science***

**CMPS 277 Database Systems-‐ Spring 16-17**

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**Project Description:**

**This project aims at creating a database to manage a university’s athletic teams**

**Entities:**

**We will maintain information about the following set of entities:**

**People:**

**Player: ID, Name, Age, Team Number, Team Position, Team Role (Captain, substitute, reserve,).**

**Staff: ID, Name, Age, Role (Doctor, Assistant-manager, Coaching, Management), Team.**

**Club: Name (is a candidate key), Buildings/Locations/Stadiums.**

**Team: Name, Awards, ID, Type (Soccer, Basketball, Handball etc.)**

**Tournament: Name (is candidate key), Type (League, Cup etc.), Date started, Data finished, Prize, #of rounds, Sponsors.**

**Court: Type (Football, Basketball, etc.), Name (is candidate key), Location, Condition (Indoor or Outdoor), timing (opening/Closing), Size.**

**Record:**

**Player Record: Number of assists, Number of goals, Number of matches played, years of experience, Date (joined), Height, weight, Achievement/Awards**

**Team Record: Number of assists, Number of goals, Number of matches played, Achievement/Awards, and Number of wins/loses**

**Relationships:**

**The following relationships will hold between our entities:**

1. **Teams will have Players, they will also have Coaching Staff and Management,**
2. **Clubs will have Teams belonging to them, they will have People associated with them as Members or Staff.**
3. **Players are Members in a Club and play on a Team in that Club**
4. **Teams will participate in Tournaments**
5. **Teams will train/play in courts.**
6. **Tournaments will take place in courts**
7. **Team will have team record**
8. **Player will have player record**

**Constraints:**

1. **A Person cannot belong to more than one Club.**
2. **A Club can have Several Teams but a Team can only belong to one Club.**
3. **No two Teams can have the same court.**
4. **Each club must own court.**
5. **No team can participate in a tournament without the minimum number of players.**
6. **No two team can win the same award for the same year.**
7. **A club can have several staffs but a staff can only belong to one club.**
8. **A team can have only one team record**
9. **A player can have only one player record**

**Sample Queries:**

**1.      List all Players belong to a specific team**

**2.    List all Players according to their (achievements, weight, height, age, or team position)**

**3.      List all team that won a particular award**

**4.      List all teams that belong to a specific club.**

**5.    List all tournaments according to the value prize**

**6.    List All tournaments the have been participated by a specific team**

**7. List all staffs belong to a specific team.**

**9. List All courts that are owned by a specific team**

**10. List All players according to a specific criteria (Height, weight and so on from the record)**

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