**Assignment 2**

Modified from Exercise 4.1.3   
  
A database is needed for recording information about sport teams, their players, and the players' fans. It should include the followings:

* For each team, its name, its players, its team captain (one of its players), and the colors of its uniform.
* For each player, his/her name
* For each fan, his/her name, favorite teams, favorite players, and favorite color.

Answer all four questions.

1. **ER diagram (50 pts.)** Give an ER diagram for the database. Be sure to write down all the the assumptions you have made.
2. **Functional Dependencies (20 pts.)** List all the FDs that hold for the database.
3. **Relational Schema in Data Definition Language (20 pts.)** Translate your ER diagram into a relational schema in the form of SQL DDLs. Choose appropriate data types for each attribute and include primary key and foreign key constraints.
4. **Normal Forms (10 pts.)** For each relation in your relational schema, write down whether the relation is in BCNF or 3NF, and if not give a violating FD.

**Submission instructions**

* Only electronic submissions via Laulima will be accepted.
* This is an individual assignment. Every student must make a submission to receive credit. However, you may discuss the problem with at most two other fellow students, but you must write the answers up yourself.
* List all fellow students that you had discussions with in your PDF submission.
* Label the answers to the four questions clearly.
* Type and/or draw the answers to all four questions using a word processor (eg Microsoft Word).
* Use the diagramming features of the word processor to draw the ER diagram.
* Export the document as a PDF file.
* In addition to the PDF file, submit a text file (named with a .sql suffix) containing all the DDL(s) that is needed for the creation of the database. This DDL file should be executable as a script using the DB2 DBMS command line processor.
* You should name your submission files <UH email id>-a2.{pdf,sql}. For example, if your UH email address is john@hawaii.edu, your submission should contain the following two files:
  + john-a2.pdf  contains answers to all 4 questions of the assignment.
  + john-a2.sql  contains the DDL from question 3.
* Make sure that the PDF submission also contain your name and list of collaborators.