CSCI 585 - Database Systems
Homework Assignment 1: Part 2 & 3

Part 2: Map the EER diagram into Oracle OR-DBMS model (20 points)

Convert your EER conceptual schema into tables and then implement these tables in the Oracle database. You can change your EER design freely during you conversion since your schema might not optimal. You will get full credit for part 2, part 3 if your query is working properly.
Note: You are required to populate your database with the given data and test data with the queries in Part3. Use the excel data files for this. The excel file has tabs in the bottom for each data section. Also, go through the queries in part3 to make reasonable assumptions regarding the attributes unavailable in the files provided and fill them out.

For installing Oracle on your Windows Machine: (5 points, you do not need to submit anything for this credit)

1-Install Oracle Database from the given link (this version or later version)
Oracle Database 11g Release 2 (11.2.0.1.0) Enterprise/Standard Edition for Microsoft Windows
http://www.oracle.com/technetwork/database/enterprise-edition/downloads/index.html
2-Download corresponding filesto your OS system from the given address
3-Installation guideline can be found at
http://www-scf.usc.edu/~kpnguyen/Oracle_11g_R2_Installation_Guide.pdf
The following steps must be used to access the Oracle database server.
//$ is the system prompt
$ sqlplus //Use sqlplus to issue sql statements

Reduction Guidelines for Oracle OR-DBMS
- Must use Oracle Object-Relational features.
- Must use **user-defined subtypes** for specializations.
- Use reference for **foreign key**.
- **Do not use triggers**.

Reference: Refer to Oracle manual for information on how to create tables, indexes, insert data, etc. (a link is provided in the web page). Reading the manual and learning how to use Oracle are purpose of this homework.
http://www-scf.usc.edu/~csci585/course.html

Part 3: Queries on the database (75 points)
Write the following queries in Oracle SQL and run them on your database developed as mentioned in Part 2 of this assignment. Depend on the data, your

query might not return any data but it does not means your query is wrong.

Q1: Find the users who have the wall set as public view and whose age is over 24. (8 points)
Q2: Find the user can see the most number of other users' walls (8 points)
Q3: Display the post which has the most people likes but no comment. (8 points)
Q4: Display the user IDs of all the users who make a post that is liked by the user with member ID "F2". (7 points)
Q5: Display the top 2 User IDs has the most number of likes (both posts and comments) (8points)
Q6: Display the top 2 user IDs who have the walls having the most number of posts. (7 points)
Q7: Display the comment id and its author of the latest comment posted by the user with user ID "F2". (7 points)
Q8. Find the users who has the most number of friends but there is no posts on his wall (7 points)
Q9: Find users who are older than 23 and has more than 2 friends but didn't make any posts or comments (7points)
Q10: Display the user IDs and their age (if applicable) of the users who wasn't born in "Los Angeles, CA, United States" but make a post in "Los Angeles, CA, United States" (8 points)

Submission Guidelines

1. Your submission of part2 and part3 should include one createdb.sql file, one dropdb.sql file, ten .sql files for queries described in part 3 (named q1.sql to q10.sql), and one readme.txt file.

2. **createdb.sql** file should create required types, tables, indexes if required, generate primary keys, ... , and populate sufficient data based on the skeleton data provided.**"**Sufficient data**"** means enough data such that your queries return something, but not everything. There is 60 points penalty if this file is missing since it is not possible for us to check your queries without any data.

3. The **dropdb.sql** file should drop all types and tables that are created by createdb.sql. There is 10 points penalty if this file is missing from your submission or if it does not drop all of your database objects.

4. **q1.sql ~ q10.sql** query files should contain SQL statements for queries Q1 to Q11described in part 3 respectively. If you need to write two or more SQLs for ONE step, then they should be written after each other in ONE file.

5. The **readme.txt** file must have your name, SSN/USC-ID, the name of the database and tables that your createdb.sql file generates, and your user name on aludra.usc.edu. There is 25 points penalty if this file or some of the required information is missing from your submission.

6. You must make a .zip file to include all of your files in one file (<your_username>_hw1.zip:
Your zip file should contain **createdb.sql dropdb.sql readme.txt q1.sql q2.sql q3.sql q4.sql q5.sql q6.sql q7.sql q8.sql q9.sql q10.sql** files.
For example, if your USC username (USC email id) is John, then your zip file should beJohn_hw1p2p3.zip.

7. You need to submit the 2nd and 3rd part of your assignment to https://www.uscden.net/.

8. No late submissions will be accepted.