CS4347.0U1 Database Systems

Final Project Deliverable I:

Due back on: Thursday, July 2, 2015 at 11:00pm.

This is from our syllabus: No e-mail submissions are accepted. No late submissions are accepted. Please plan accordingly and do not leave your submissions to the last minute. If you encounter a problem during eLearning submission, please contact 24/7 eLearning Help IMMEDIATELY. This help is available 24/7 at:
eLearning Help URL: http://www.utdallas.edu/elearning/eLearningHelpdesk.html
eLearning Help Phone: 1 866 588 3192
Any submission that is missed will be graded with a zero. Please do not insist for exceptions.

Purpose: Demonstrate the ability to understand and implement the ER model, Relational model, and SQL - including DDL and DML – on a comprehensive project framework.

As each database design will be different, no min./max. number of pages are enforced for the final project deliverable I. The final project deliverable I will be 40% of your overall project grade. The detailed requirements for deliverable I are as follows:

(1 POINT) - Title of your database system.

(2 POINTS) - Name of the participants and delegation of tasks.

(5 POINTS) - An introduction of your database including why you have chosen to design this particular database. Please indicate to which real world problem(s) you think your design will help solve.
Please note that you are free to choose a web based or a non-web based design. One has no (dis)advantage over the other. If you choose to use a web based design, please note that you will need to have a web server to store and maintain your database. It will be your responsibility to design, install the necessary tools (such as an ER diagram drawing tool, DBMS, web server, compiler, etc.) , and implement the database of your design.

(5 POINTS) - Comparison of your work with existing similar databases, if any. For this, please make a literature search for similar database applications and cite them in your report properly. Please include properly cited references in IEEE paper referencing format. (You may see a referencing example in the sample IEEE paper in URL: http://www.ieee.org/documents/ieeecitationref.pdf). YOUR REPORT DOES NOT HAVE TO BE 2 COLUMNS, IT CAN BE SINGLE COLUMN. ONLY REFER TO THE SAMPLE IEEE DOCUMENT FOR MODELING AFTER THE PROPER PAPER REFERENCING.) It means that your references should be numbered, and these numbers are properly cited in your project report.

(15 POINTS) Requirements gathered: A detailed description of the requirements you've gathered for your database. They can either be done in a narrative way, or listed in bulleted way. Also

specify how each fact listed is represented in your database. As an example: “A child can checkout several books from library”.

A Child Entity with (….) attributes.
A Library entity with (….) attributes.
A Check-out relationship with (…) attributes (if any) and with cardinality (…).

(20 POINTS) - ER diagram

(20 POINTS) - Based on the ER diagram, draw the schema diagram of your design USING A TOOL, rather than drawing manually. Specify Primary Keys, Foreign Keys and referential integrity constraints in the schema.
Please take this as an opportunity to learn and master new tools to help ease your life in database design and implementation. Also, remember that this experience will help you get and success jobs in the near future.

(30 POINTS) - Implement your design to create the database, tables, and also populate your tables with min. 10 tuples per table.

Please make sure the whole report is in your own words. Even if you refer to a scholarly work, the words should not be exact copy and pastes, but should be rephrased in your own words. Otherwise is called plagiarism and requires disciplinary action. Please refer to course syllabus about policy on plagiarism.

Tools that you can use:
ER Diagram drawing tools:

- MS Visio (a 60-day trial version is available at http://technet.microsoft.com/en-US/evalcenter/hh973399?WT%2Eintid1=ODC_ENUS_FX103791368_XT104000916)
- Modelio (Free at http://archive.modeliosoft.com/en/products/modelio-free-edition.html)
- Creatly (Free at http://creately.com/)
- Balsamiq mockups (Free at http://www.balsamiq.com/products/mockups)
- IBM Rational Software Architect (RSA) (available via Dreamspark)
- etc.

Relational DBMS:

- Microsoft SQL Server 2012 (available at open lab computers, also via Dreamspark)
- Oracle http://cs.utdallas.edu/about/Oracle%20help.htm
- Microsoft Access
- Any DBMS that you have legal access.
- etc.

Web Server (if you are using any):

- Apache Tomcat
- Microsoft Internet Information Services (IIS)
- etc.

Application Program Developers

- Code:Blocks (C++)
- Microsoft Visual Studio
- Netbeans
- Eclipse
- etc.

(2 POINTS) Naming Convention:

If you are submitting multiple files, please create a ZIP file of all your files and use the following naming convention for your ZIP file:
CS4347-Assignment<number>-<FirstName><LastName>.zip.

So, student John Smith will name his 1st assignment zip file as:

CS4347-Assignment1-JohnSmith.zip

If you are submitting a single file, please name your file as:

CS4347-Assignment1-JohnSmith.doc or .pdf, etc.

If you are submitting a group project, then include ALL STUDENTS' firstname and lastnames in your project name. For example, students John Smith, Jane Blake, Matt Clay will submit ONLY ONE PROJECT and name it as:

CS4347-Project-JohnSmith-JaneBlake-MattClay.zip

Good luck.