**CS 3743 – Project Phase 3**

Due: Friday, November 27st by the end of the day (11:59pm)

Upload a PDF to Blackboard.com

Total possible points: 150 points

**Project Overview**

The project consists of 3 phases with the goal of learning how to design an application with an underlying database system. You can consider any application/framework you want to learn, design, and implement. Project can be a local, web-based, android, or client/server program in java or python (no C or C++).

Here are all 3 phases in general: (The details will be provided for each phase separately)

* Phase 1:
  + Requires providing ER diagram and relational schema (25 points).
* Phase 2:
  + Provide the SQL commands required for your project (25 points).
* **Phase 3:**
  + You should provide the deliverable application **source code in a zip file**, and a **link to a recorded video (on youtube.com with the maximum of 14 minutes)** presenting all the functionalities exist in your application and a written report (Total of 150 points – 15% of your final grade).

**Each of the phases has a written report** which should be uploaded as a single PDF file on blackboard.com. Keep all your original drawing/diagrams/files for the final phase, you may need to upload the modified versions, or we may ask you to provide some of the source files.

**Project: Phase 3 - PART 1**

Part 1 (update of phase 1) should be a separate PDF file (you can update your old file, highlight the changes **if any** and re-upload) – name the PDF file yourABC123-Phase 1 Final.pdf

**Project: Phase 3 - PART 2**

Part 2 (update of phase 2) should be a separate PDF file (you can update your old file, highlight the changes **if any** and re-upload) – name the PDF file yourABC123-Phase 2 Final.pdf

**Project: Phase 3 - PART 3**

For phase 3 of the project you need to provide:

* 2 PDFs as described above (final version of your phase 1 and phase 2) – you have a chance of getting some points back!
* Compressed source code of your final deliverable application in zip format
* Link to a recorded video of less than 14 minutes on YouTube
* A report expressing the details of your project (include the link to recorded video in this file at the begining) - name the PDF file yourABC123-Phase 2 Final.pdf

For all the **uploaded file**, please **download them** from the blackboard again to your computer and **make sure all the files** can be opened, are readable, and source code can be **unzipped**.

For the deliverables stated above please **pay attention to the followings**:

* Program and the source code:
  + Source code should be compressed in .zip format (no rar, etc.)
  + The application should use all the SQL queries you provided in part 2. If you have missed a couple of queries or you have changed your mind for some of them feel free to add them to the report of part 2 and highlight them.
  + Program should provide a menu of options to users to choose from:
    - Each choice of the user should result in a report generated and printed out on the screen with the help of data provided by the database (you should enter at least 4-5 rows in each of your tables). Then user should be redirect to the menu again (Do not forget the Exit option).
    - The structure of the menu and how many levels it has (organization) is up to you. You should revisit all the menu in your recorded video and show the generated outputs.
* Recorded video:
  + You should provide a recorded video of your screen presenting execution of your program and the results generated by choosing each of the options provided in the menu (you should insert data to each table using your program, and the added rows should pops up when you get the report of all the data in the table)
  + You can record the video using many free softwares, I personally use “OBS studio” from **obsproject.com.** The software is free, easy to use, and available for most of the platforms.
    - Record your videos in 1980x1080 resolution and MP4 format.
    - Record couple of small clips and check for the sound, and the screen that is recorded (if you have multiple screens and microphones).
  + There are free softwares to crop/modify your video, however I suggest you don’t complicate the process. Practice once and record on the second try. But if you are still interested in cropping/editing your video, you can use ADOBE PREMIERE, the license is provided to all UTSA students.
  + If your video got rejected by YouTube, verify your phone number, this will help most of the times. Please **do not** add any background music, and only record the screen output (not the web camera)
  + When you upload a video, you can choose to be “unlisted”, so only the people who have the link be able to watch it, and it will not show up in the searches.
  + After December 14th you can take down the video and delete it from the Youtube.
  + After setting your video as unlisted (step 3 of the upload in YouTube) and all processing finished, Copy the generated link, open a new incognito window in your chrome browser, **do not** login to YouTube, and try to see if you can watch your own video in incognito mode (this means we can watch it too).
* Final report of phase 3:
  + Final report of your project should be at least a page describing the functionality that your program will provide, the main idea behind it, IDE (NetBeans, PyCharm, Eclipse), language (java, Python) and SQL server that you have used (DB2, SQLite, MS SQL server or CS department MySQL)
  + Specifying the mapping between your provided queries in phase 2 and the menu option in the program (which provided query is used for each menu option)
  + The mapping between the menu options and your tables (this could be provided also in above mapping). For queries requiring join, you should mention both the table names in front of menu option.
  + Provided menu should touch variety of topics
    - Inserting to tables
    - Deleting specific items
    - Updating value.
    - Presenting all the data in the table
    - **Nested queries**
    - **Updating values**
    - **Joining** couple of tables to generate reports
    - Uses **group by and having clauses**
    - In brief should show your knowledge in the course and taught materials

**No Handwritten Answers**

Project requires some written responses and some diagrams.

* For the written responses, use a standard word processor like Microsoft Word, LibreOffice Writer or Google Docs. You can even fill in your answers in the provided Microsoft Word document you are reading now.
* Diagrams can be made using Microsoft PowerPoint or Google Drawings, among others. You can explore other tools as well, just search around and verify the tool you are considering is compliant with the design aspects that are presented in class. I recommend using Microsoft PowerPoint (the license is provided by UTSA to all the students).
* Export/Save-As your drawn diagrams to a picture (“JPG”, “PNG”, or any other format that your word processor supports). Insert/Copy-paste the exported diagrams to the appropriate place in the word processor you are using.
* After you gathered all your answers in a digital format in your preferred word processor, export to a PDF, upload that PDF to Blackboard.com
* Before uploading the PDF file please check the file for problems such as drawing’s quality (unreadable text in drawings).