Database Project

Phase 3

Fully implement and test your database product. Verify all requirements are met.

1. **Submit the final report (10 pts).** The report must be singled spaced and using 12 point font. The report must have at least 10 pages long. Diagrams are allowed.

   The report must contain at least the following sections:
   1) Abstract.
   2) Mission statement.
   3) Mission objectives.
   4) An E/R diagram for your proposed database. Specify primary keys, relationships and their multiplicities.
   5) Relational model after normalization. For each table, show the attribute dependencies, and explain why it is in 1NF, 2NF, or 3NF;
   6) A complete list of uses cases that include actor and step-by-step descriptions.
   7) Use case realization (include the SQL statements that implement every use case). Once again, be sure to have: for each entity, at least one insert, one delete, one update, and one aggregate query; and for each set of entities that have a direct relationship, one joint query.
   8) Test plan and records. For every use case, specify the input data, the expected output, and the actual output. Correct any bugs you find.
   9) Conclusion.
   10) Reference.

2. **Make a demo (20 pts)** to show all the major functionalities of your database product.

   For the demo submission, you need to populate all the tables, then perform and record the following queries and their outputs:
   1) For each table, show all data;
   2) For each table, perform a query using at least one of the aggregate functions;
   3) For each relationship, perform a joint query on the tables that are DIRECTLY related through that relationship.

   You can record the demo either by screen image capturing, or by screen video recording.

   - For video recording, you can use the Zoom program. More information on Zoom here: https://www.uhd.edu/computing/help/Pages/Zoom.aspx. The video file can be quite large, so don't submit it to Blackboard. Instead, upload it to Google drive or OneDrive, and submit the link to the file. Here are instructions for OneDrive: https://www.uhd.edu/computing/services-training/training/Documents/OneDriveShareVideo.pdf.
   - If you use screen image capturing, you should put the images in a file and submit the file on BlackBoard.