OPIM 5272 Class Project

The class project is designed to integrate the various business and technical concepts that you learn in the course. The project will consist of modeling a business process that can benefit from proper data management. The business process should be drawn in Visio, as should the data model that will be the basis of the database that you will design to benefit the process. You will then create a database in Oracle. Your project will be graded based on correctness and impact level. The outline of the project phases are provided below. The deadlines for the project proposal and the final report are posted on the course website—**failure to upload your reports by the posted date/time will result in your team receiving 0 point for that portion of the project.**

Stage 1: Project Proposal

Pick a business process you would like to study that can benefit from proper data management. Your two-page proposal should begin with a description of the business/company that you are studying, and explain why the process you are studying is a business process—provide the name of the process, the triggering event, the interrelated tasks that together make the process, the specific result of the process, and the customer. **Your process name and major steps should all be written in the format of Action Verb + Noun**. You should also discuss the problems with the current process and clearly list out how you are planning to improve the business process in your to-be process, e.g. by reducing data redundancy, improving data integrity, changing the workflow, etc. Focus your discussion on the key points and keep it brief (***at most 2 pages; points will be deducted if exceeding page limit)***.

In addition to the two-page proposal, you should also include a swim-lane diagram depicting the as-is process in a Visio document. Keep in mind that the purpose of drawing the swim-lane diagram is to identify issues. Avoid an unnecessarily complicated diagram by focusing on the part of the workflow that has issues and needs improvement and simplifying the others.

Compress your proposal (named ***Proposal-team-x.docx***) and the Visio file (named ***AsIs-team-x.vsdx***) into a zip file named **Proposal-team-x.zip** and upload it to the course FTP site before its posted deadline.

Stage 2: Final Report

Your final report consists of 6 components.

1. The revised two-page proposal based on my feedback, named ***Proposal-team-x-revised.docx.***
2. The revised swimlane diagram for the as-is process in Visio, named ***AsIs-team-x-revised.vsdx***.
3. A swimlane diagram for the to-be process in Visio, named ***ToBe-team-x.vsdx***. Highlight the parts that are different from the as-is diagram.
4. An E-R diagram in Visio depicting the conceptual design of the database system that you propose, named ***ERD-team-x.vsdx***. Your E-R diagram should be in 3rd normal form and

satisfy all the requirements on Slide #47 in Lecture 3. Submit only the most critical part of your E-R diagram, which should have no more than 6 entities.

5. A script to implement the database in Oracle, named ***Table-team-x.sql***. You script should create the tables, provide proper relationships, and make additional modifications to enforce data integrity. The database should be based on the diagram that you draw in the previous step and the tables in the database should all be in 3rd normal form. Use INSERT statements to add sample data to the tables. Save the SQL statements that you use to create tables and to add data in a single script so that I can click the "run script" button to create all the tables and get all data entered into the tables all at once. Add comments/remarks in the script to explain what each query is trying to do.
6. A script to generate reports in Oracle, named ***Report-team-x.sql***. Your script should generate two reports that will significantly benefit the business process you are studying through the queries that you design, of which at least one should be a group/total type and at least one should be a multiple-table join query. Save the queries in a single script so that I can click the "run script" button to generate both reports all at once. Add comments/remarks in the script to explain what each query is trying to do and why it is important. If you use substitution variables in your query, provide sample inputs in the remarks. If more than two reports are generated, the first two will be graded.

Compress the six files into a zip file named **FinalReport-team-x.zip** and upload it to the course FTP site before its posted deadline.