COSC 457 Database Management

Term Project

Goals: This project has two phases that will result in a database application. Throughout this project, students will learn not only how to design and implement a database application but also learn about how to work together. The first phase of the project is about information gathering and database design and the second phase of the project is about database application implementation.

This project will give students development experience in the following area of database design and implementation.

* User requirement fact gathering.
* Project planning
* Database conceptual design using Entity Relation Model.
* Converting the conceptual model to a logical data model.
* Implementing the logical model to a physical model.
* Normalize the logical data model.
* Design an application for a database.
* Implementing an application for a database.

Documentation: There will be two types of documentation will be created. In Information gathering and design phase, the document describes the user requirement, all the questions used for the fact gathering, potential database queries, and Entity Relation Model with its schema. In the second phase, functional and tutorial manuals for the completed database application will be created.

Grading Rubric

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| Fact Gathering | | | | | |
|  | Beginning | Developing | Accomplished | Exemplary | Score |
| Fact Gathering | Some of the major facts are not captured. | Most of the facts are gathered but not completed. | All the major facts are gathered but some minor facts are still not gathered | All the facts are gathered. | /10 |
| Analysis | Limited analysis | Analysis is done but some facts are not consistent | Analysis is accomplished but there is room to improve | Complete analysis | /5 |

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| Project Planning | | | | | |
|  | Beginning | Developing | Accomplished | Exemplary | Score |
| Time Line | Poor time line. | Time line is established but some are not realistic. | Time line is set and the project can be finished in that schedule. | All the time line set and the schedule is feasible and clearly estimated. | /5 |
| Work Distribution | Work load is not distributed evenly. | Work load is distributed relatively even but still have some issues. | Work load is distributed evenly but some members still have more work load. | All the members work load is distributed evenly | /5 |

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| Database Design | | | | | |
|  | Beginning | Developing | Accomplished | Exemplary | Score |
| Conceptual | ERD does not match with the user requirement. | ERD reflects most of the user requirements. | ERD reflects all the user requirements. | ERD reflects all the user requirements effectively. | /20 |
| Logical | ERD is poorly converted into a schema. | ERD is converted into a schema with some inconsistencies. | ERD and its schema are compatible. | ERD is converted into a schema correctly and efficiently. | /5 |
| Physical | There are some discrepancies between the schema and the physical design. | Some constraints are not designed. | The physical design reflects the entire schema table with foreign keys and primary keys. | The physical design reflects not only keys but also other constraints. | /5 |

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| Application Design & Implementation | | | | | |
|  | Beginning | Developing | Accomplished | Exemplary | Score |
| Application Design | Not all the user requirements are designed in the application | Most of the user requirements are designed. | All the user requirements are designed | Not only all the user requirements are designed but also the user interface destine is excellent. | /10 |
| Implementation | Not all the designed functions are implemented | Most of the designed functions are implemented | All the designed functions are implemented | All the designed functions are implemented and the user interface is excellent. | /20 |

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| Second Documentation | | | | | |
|  | Beginning | Developing | Accomplished | Exemplary | Score |
| Manuals | Not all the functions are explained in the document. | All the functions are explained but lacks of tutorial document. | All the functions as well as tutorials are documented. | All the functions and tutorials are documented effectively. | /5 |

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| Presentation | | | | | |
|  | Beginning | Developing | Accomplished | Exemplary | Score |
| Presentation | Student Reads a note. Presentation contents are not enough. | Student faces audience and does presentation. Contents are not enough. | Student faces audience and has right amount of contents. | Student faces audience with right amount of contents. Presentation speed, voice clearness, and hand gestures are all adequate. | /10 |