Faculty of Computer Science and Engineering

Taibah University

CS 371 – Database Systems

Project Part.1: Requirements Phase and Conceptual Design Phase

Due: Wednesday, 23/03/2022 at 11:00 pm

WORTH 5.0% of final assessment mark.

At the beginning of the project, you need to choose one of the proposed database system ideas.

Then, you need to start the requirement phase. In this phase you are required to develop a user specification highlighting *data requirements* (identify what types of data needs to be stored in the database) and *transaction requirements* (identify the important and frequent database operations – data manipulation and queries), for the chosen database system.

The instructor will explain the details of the requirements as well as act as the client of the proposed system. You are encouraged to ask questions and discuss with the instructor to clarify system specification.

After identifying the requirements (Phase 1), you will start the conceptual design phase. An EER model should be developed in this phase. More detail is given in Phase 2.

Submission:

Phase 1: System Requirements

you need to submit *Requirements* section which has the following sections:

- Data Requirements – outlining the major data items
- Transaction requirements – outlining the data manipulation and queries
- Business Rules

Hint: Sample *Requirements* are attached, called "*Database Requirement_Template*" file.

Phase 2: EER Model

You need to design the EER model. The EER model MUST have the following sections for which it is marked:

- EER Model
- Documentation – Data dictionary details (description of entities, relationships and attributes)

Hint: Sample EER models and documentation is provided in the Appendix.

Method of submission:

- Softcopy submission is required by the due date.

- The first page of the document **must** have your name, students' number, section, course name and code, academic year, instructor name, and Taibah University Logo.

Late submission:

25 % of the possible maximum mark for the assessment item will be deducted for each day that the item is late. Assessment items submitted more than four days after the due date will be awarded zero marks.

Percentage of total grade:

This assignment carries 5.0% of the overall grade. However, this phase of the project is critical to assist you in completing the further phases of the database design and implementation correctly and effectively.

Appendix

Sample format for documenting entities:

Entity Name	Description	Aliases	Occurrences
Item	Resources made available to staff and students		In their respective storage locations

Sample format for documenting relationships:

Entity name	Multiplicity	Relationship	Multiplicity	Entity name
Item	1..*	CategorizedTo	1..*	ItemType

Sample format for documenting attributes:

Entity Name	Attributes	Description	Data Type & Length	Nulls	Multi-valued	Derived	Default