Course:  INFO 579: SQL/NoSQL Databases for Data and Information Sciences

Module/Week: 4 - Week of September 11, 2023

Topic: Logical and Physical Data Model

NOTE: The assignment document must provide the below information. Up to 10 points may be deducted due to the lack of the below information.

Student’s Full Name:

Course Title:

Term name and year: Example, Fall 2023

Submission Week: [example, Week 4 Assignment]

Instructor’s Name:

Date of Submission:

The above information must be provided at the upper left corner of the first page of the document.

Each answer(s) must be preceded by the question/ title of the topic/article of the assignment.

Acceptable File: Word (put the screenshots of the models) or PDF.

File Name Format: Name your file according to this convention: INFO579\_Week4\_Lastname.pdf. Submission must be made in a single document.

NOTE: There will be a 20% deduction of points for any late submission.

**Week 4 Assignment:**

Purpose: Building a Logical Data Model based on the Conceptual Model and Normalization done as part of the previous assignments. Also, our next goal is to build a Physical Data Model using the logical model.

Background Info: A small business wants to automate its data management system. The data provided to you in the spreadsheet file represents the current data they are storing outside of a database. This company needs your help to organize its data so that it can manage it more effectively to grow its business. Note that this is just one area of their business data.

You are required to do the following:

Show your Logical and Physical Data Models based on data provided in the Excel file in the Week 4 Assignment folder in D2L:

Step-1: Logical Data Model

Must be based on Conceptual Data Model provided in the Slide #4 of this week’s presentation slide (in fact, you will make an enhancement of the conceptual model in your logical data model) and the data provided in the data file – Primary key, Foreign

key, PK/FK relationships, and other non-key attributes listed

Must be in synch with the Normalization done (assuming normalization

assignment is done with accuracy)

Step-2: Physical Data Model

Must be built on top of the Logical Model (do a save-as Logical Model)

Must identify proper data type and NULL/NOT NULL for each attribute.

NOTE-1: Draw your models using an MS Visio Diagram or LucidChart. Note that one single Word Doc file should show both the Logical Data Model and the Physical Data Model. Upload the file to the Week 4 Assignment Dropbox in D2L.

NOTE-2: Please read the slides uploaded to Week 4 folder in D2L. Send me an email if you have any questions.

NOTE-3: The Cardinalities (MAX) and Modalities (MIN) must be specified (see the screenshot below) in drawing relationship between the entities.

A diagram of numbers and symbols

Description automatically generated

END