MSDS 7330
File Organization and Database Management
Homework 3 ER Models

Name:

What to Submit

Your final submission shall be a single pdf document that includes this document, screen captures of your exercises plus your answers to each of the written exercises. Note that you are expected to clearly label each section so as to make it clear to the instructor what files and data belong to which exercise/question.

Collaboration is expected and encouraged; however, each student must hand in their own homework assignment. To the greatest extent possible, answers should not be copied but, instead, should be written in your own words. Copying answers from anywhere is plagiarism, this includes copying text directly from the textbook. Do not copy answers. Always use your own words. Quoting a cited text is not a proper answer. For each question list all persons with whom you collaborated and list all resources used in arriving at your answer. Resources include but are not limited to the textbook used for this course, papers read on the topic, and Google search results. Note that 'Google' is not a resource. If none were used, then you must state so. Don't forget to place your name on and in the document.

Exercise 1 : The MSDS Program

Using MySQL Workbench, create an ER model that models the entities and relationships of the MSDS program. Your model should account for at least the following:

- Entities to hold the student information
- Entities to hold the instructor information
- Relations to hold the associations between instructors, courses, sections, and students
- Information to model your previous courses taken, your earned grade in each course, and your ongoing courses.
- Information to model your payment and financial account information.

Be sure to submit your ER Diagram screen capture.

Exercise 2 : Ecommerce Database Phase i

You are required to design the ER model for an Ecommerce order database. The business has outlined the following "must have" requirements for the Ecommerce system:

1) Customers should be able to place orders online using their website
2) Customers can buy multiple items and /or multiple quantities of the same item on a single order
3) Each order line item has a line price (Price of Item * Qty)
4) An order must be paid with a credit card and/or Gift Card(s)
5) The orders require an address where the items can be shipped to
6) All items have a Sales Price and a Cost Price

Using MySQL Workbench, design an ER model that satisfies the above requirements. On your ER Diagram, annotate the various portions to identify the portions of the model that satisfy each of the requirements. Be sure to submit your ER Diagram screen capture.

Exercise 3 : Ecommerce Database Phase ii

After a very successful launch , the retailer is getting ready to expand its operations and launching its operations in Canada and UK. The business has determined that the items can be sold at different prices in different countries.

Using MySQL Workbench, update your ER model from Phase i to accommodate these new requirements. On your ER Diagram, annotate the various portions to identify the portions of the model that satisfy these new requirements.