CIS 310-50 Fall 2021

Assignment #3

50 points

- 1. Microsoft Visio Professional 2019 is application software for Windows PCs that allows people to create plans, drawings and diagrams. It is commonly used for purposes such as building and electrical plans, IT network diagrams, company organizational charts, and Entity Relationship Diagrams (ERD).
- 2. Visio is available on your virtual desktop. You can connect to the virtual desktop from your personal computer using a VMWare Horizon client if you are on campus or off campus. If you do not have the client installed on your personal computer, you can download it. See the instructions and the video in the Assignments folder. If you are on campus in the COB computer lab or in the Davidson Hall lab, you can log in to the virtual desktop directly, without running the client.
- Work the Visio tutorial posted in the Course Documents/Week 4: Sep 13-19 folder. (I cover some elements of the tutorial in the Panopto recording. See the Panopto & MS Teams Recording content area.)
- 4. Create a Crow's Foot ERD in <u>Visio</u> for the database in Figure P3.10 on page 107 of your textbook. This is the same database that you created in Assignment 2. On the diagram you should have four entities/tables and all attributes in each table. Identify the Primary Key(s) and Foreign Key(s) for each table and show the keys on the diagram (like in the tutorial). Using Visio symbols (II, for the 1 side of the relationship and **Crow's Foot** for the many side of the relationship) draw the relationships between tables using a solid line or dotted line. Visio uses solid lines to indicate a strong (identifying) relationship between two entities.

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Dashed lines are used to indicate a weak (non-identifying) relationship between two entities. Symbol on the many side of the relationship indicates a mandatory participation, whereas symbol indicates a nonmandatory participation. (See Chapter 4.) Use a verb to describe each relationship between two tables (like in the tutorial). Select the proper font and line width to make the entire diagram readable.

- 5. Use the text box to write all of the business rules for all of the relationships. Include the text box on the diagram (like in the tutorial). (Each relationship between 2 tables has I2 rules.). For example, "An employee has zero or more benefits". "A benefit is granted to one and only one employee".
- 6. Save the diagram in a A3_Your_First_Name_Your_Last_Name.vsdx file on the J drive. For example, A3_John_Brown.vsdx. Submit the file to Blackboard on or before the due date. (Your account name on the J drive should match your ULink user id. If you do not see your account on the J drive, please let me know.)

FIGURE P3.10 THE CH03_BENECO DATABASE TABLES

Database name: Ch03_BeneCo

Table name: EMPLOYEE

EMP_CODE	EMP_LNAME	JOB_CODE
14	Rudell	2
15	McDade	1
16	Ruellardo	1
17	Smith	3
20	Smith	2

Table name: BENEFIT

EMP_CODE	PLAN_CODE
15	2
15	3
16	1
17	1
17	3
17	4
20	3

Table name: JOB

JOB_CODE	JOB_DESCRIPTION
1	Clerical
2	Technical
3	Managerial

Table name: PLAN

PLAN_CODE	PLAN_DESCRIPTION
1	Term life
2	Stock purchase
3	Long-term disability
4	Dental