

CIS4331 Spring 2019 Lab 13

Database Project Part 2: Relational Database Modeling

Important notes about your grades and this lab:

- This lab is the second part of a 3-part database project that let you design and implement a relational database.
- Each part of the project will be counted as Project grades (NOT Lab grades) when your total grade is computed at the end of the semester.

1. Objectives

This lab will help you to learn

- How to convert the conceptual model: ER Diagram of a database system to the logical model: a Relational Schema

2. Tasks to Complete

Given the following Mini Case Studies at the end of Chapter 2 in Jukic's book: Introduction to Database and Data Warehouses, map the ER Diagrams in these case studies to the corresponding Relational Schemas.

- MC4 Signum Libri on Page 54.
 - **For this question, you MUST SUBMIT your ER Diagram along with your Relational Schema**
- MC5 ExoProtect on Page 54. (This diagram is included at the end of this file.)
- MC6 Jones Dozers on Page 54. (This diagram is included at the end of this file.)

Requirements about the notations:

- **Your Relational Schema Diagram MUST follow the notation used in the Jukic's book:** Introduction to Database and Data Warehouses.
 - There are many examples of such relational schemas in the lecture slides even if you don't have a copy of the book.
- **If your Relational Schema Diagram does not follow the notations in the Jukic's book, you will not get any credit for that answer.**
 - **Different books may use different notations. Following the notations in our textbook will not cause confusion in understanding your Relational Schema Diagram.**

About the tool used to draw the Relational Schema Diagram:

- I recommend the simple and free tool ERD Plus that is available from the textbook website: www.dbtextbook.com. Click the link ERD PLUS on the top right corner of the main page and

you will go to <https://erdplus.com/#/>. I gave demos of drawing Relational Schema Diagram in the lectures #22, #23.

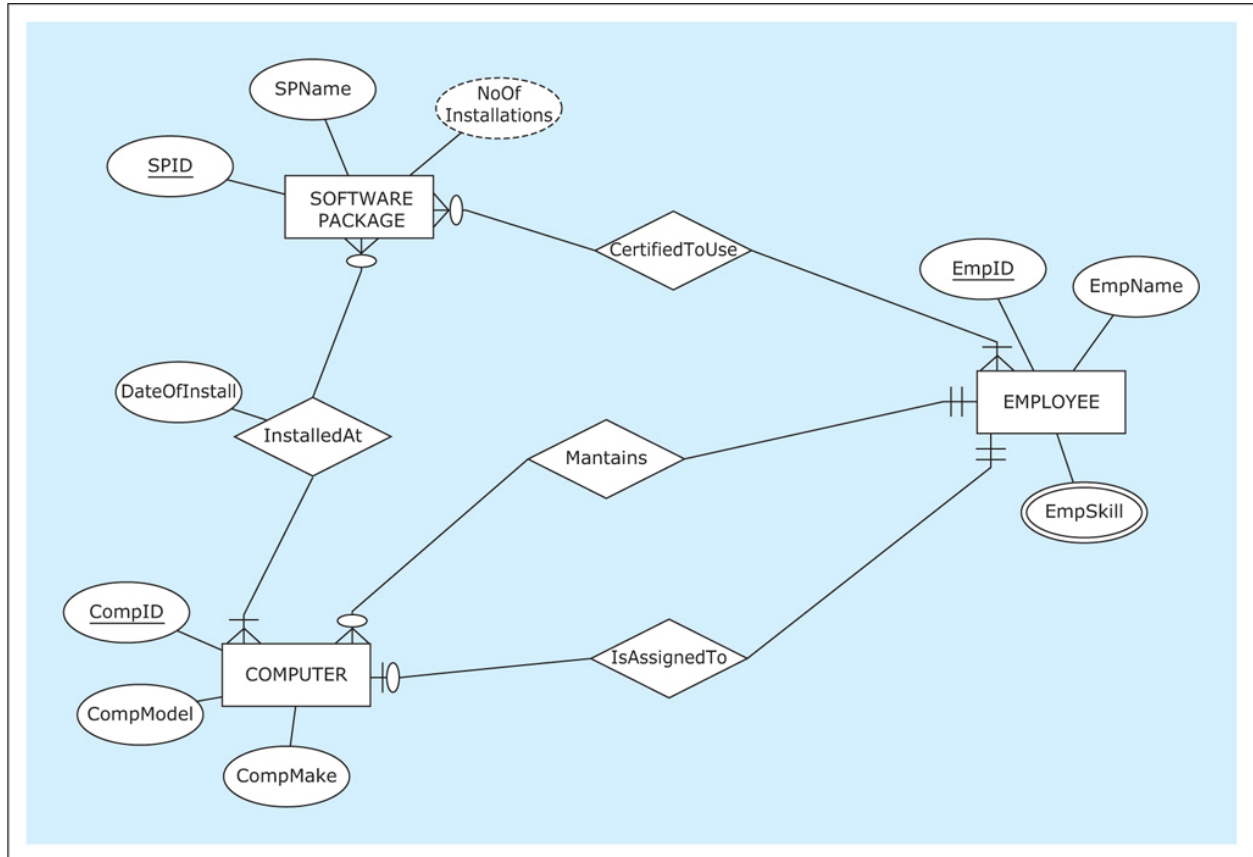
- ERD Plus draws Relational Schema Diagrams that are consistent with the notations in the textbook by Jukic, etc.
- You can export the diagram to a .png picture file.
- There is a video tutorial on YouTube:
<https://www.youtube.com/watch?v=Ttti2HcVpc0>
- You can use any other tool to draw your Relational Schema Diagram **but the resulting Relational Schema Diagram MUST follow the notations in Jukic's book.**

3. Submission Requirements

- This Project-Part2 is **due by 11:59pm, Tuesday, April 23, 2019.**
- Place your answers in a word document file with extension **.DOC** or **.DOCX**. Mark each answer-figure by MC4, MC5, MC6.
 - **For MC 4, you MUST SUBMIT your ER Diagram along with your Relational Schema.**
- Write your FULL name on the first page of the document.
- Submit your word file by attaching it to the link **Lab13-DBProjP2** in folder Assignments on Canvas.
- **If you want to submit PNG files for your diagrams, you must do the following:**
 - Make each file name include your FULL NAME, LAB NAME, and QUESTION NUMBERS like mc4, mc5, mc6 etc.
 - An **example** of such name is: **SteveMartin_Lab13DBProjP2_MC4.png.**

MC5 ExoProtect on Page 54

ExoProtect is an insurance company. The ER diagram for the ExoProtect Employees' Computers Database is shown below.



MC6 Jones Dozers in Chapter 2 End of Chapter Case Studies.

Jones Dozers is a construction equipment company. Write out all requirements for the ER-Diagram for the company's sales and rental database shown in the figure below.

Typo in the figure: switch the position of Mentor and Protégé.

