

Introduction

This lab is to let you master the ER- Modeling. (1) Please draw this ERD or EER-Diagram with [Draw.io](https://draw.io) After you have model, (2) map the model into relations (don't forget to draw the arrows), then generate (3) DDL. After you have completed the lab, please save your work and submit to the TA's google classroom for grade.

**** Make sure that your table are in 1st normal form ****

Problem

Mr.P, a new owner of (*God Speed*), a computer parts reseller company in Chiang Mai. The company branches are located in Pantip Plaza, Computer Plaza and Robinson shopping Centre. He has hired you as a consultant to design a database management system for his chain of three stores that sell PC and computer accessories. He would like to track sales, customers, and employees. After a long initial meeting with Mr.P, you have developed a list of business rules and specifications to begin the design of an E-R model as following.

- Customers place orders through a branch.
- Mr. Pree would like to track the following about customers: Name, Address, City, State, Zip Code, Telephone, Date of Birth, and Primary Language.
- A customer may place many orders.
- A customer does not always have to order through the same branch all the time.
- Customers may have one or more accounts, although they may also have no accounts.
- The following information needs to be recorded about accounts: Balance, Last payment date, last payment amount, and Type.
- A branch may have many customers.
- The following information about each branch needs to be recorded: Branch Number, Location (Address, City, State, Zip Code), and Square Footage.
- A branch may sell all items or may only sell certain items.
- Orders are composed of one or more items.
- The following information about each order needs to be recorded: Order Date and Credit Authorization Status.
- Items may be sold by one or more branches.
- We wish to record the following about each item: Description, Color, Size, Price, and Type.
- An item can be composed of multiple items; for example, a PC set (item 20) may consist of Monitor (item 22) and Keyboard (item 28) and so on.
- Mr.P employs 80 employees for his three branches.
- He would like to track the following information about employees: Name, Address (Street, City, Province, Zip Code), Telephone, Date of Hire, Title, Salary, Skill, and Age.
- Each employee works in one and only one branch.
- Each employee may have one or more dependents. We wish to record the name of the dependent as well as the age and relationship.
- Employees can have one or more skills. Based upon this information, draw an E-R model. Please indicate any assumptions that you have made. Also, draw a data model for this situation using the tool you have been told to use in your course.