Homework 1

(end of lecture 2)
MLLO 20180308

Homework 1

Design a database model using ER model techniques and ER diagram

- Please use subject based on your hobbies, research, part-time working experiences, or anything you are interested in to design a database model using the entity relationship model.
- Do not use generic company or classroom as the subject of your design, as most textbooks already use these as examples.
- Your design must logically makes sense
- Your database model should contain
    - At least 5 entity types (you are welcomed to have more entity types to make your DB model interesting)
    - At least three attributes for each entity type
    - At least 5 relationships (you are encouraged to have more)
- In addition, your design must contain the following
    - Regarding attributes
        - At least one composite-valued attribute
        - At least one multi-value attribute
    - Regarding entity types
        - At least one weak entity type
        - All strong entity type must have a key attribute
        - All weak entity type must have a partial key attribute
    - Regarding relationship
        - At least one recursive relationship
        - Cardinality ratio must be clearly labeled for each relationship
        - Participation constraint must be clearly labeled for each relationship

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Submission must include:

- A unique name for your database
- Names for your entity types, relationships, and attributes, of course.
- Written description of your “data analysis” about all relationships. For example:
  - “All employee must work for some department.”
  - “Each employee cannot work for more than one department”
  - “Each employee must work on some project, but can work on more than one project.”
- ER diagram of your database design

Hint:

- What you create in this homework may continue to be used by yourself in the future homeworks.

Other rules:

- Due 3/22 before class
- Late submission, 80% discount for each day late.
- Maximum two day delay (No acceptance on the third day counting from the submission date.)