**Week 2 Notes**

Specialized E-R

* Subclass: special entity sets
  + Types
    - Disjoint (d) – entities may only be of one subtype
    - Overlap (o) – entities may be more than one type
* Triangle => subclass relationship
* How to decide
  + Entity set vs attribute
    - Entity set -> has more data and use different things to represent it
    - Factor -> used to describe an object
  + Entity set vs relationship
    - Entity set -> noun
    - Relationship -> verb

Anomalies

* Anomaly: irregular/inconsistency in the data
* Redundancy anomaly: duplication of the same data
* Types of anomalies
  + **Update Anomaly**: changing instance of one person leads to inconsistency in the data
  + **Delete Anomaly**: deleting data can lead to unintentionally deleting entire record
  + **Insert anomaly**: cannot insert into an attribute because other data is missing
* Prevent anomalies

Functional Dependencies

* Relationship between two sets of attributes in a database table
* Attribute lists all attribute dependencies
* F+ lists all possible dependencies