BUS 362
Assignment 08 - Use Case Diagrams

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Use Case Diagrams

Purpose

- Shows how actors interact with the use cases that you have created
- Visual representation of how users move from use case to use case
- Use cases connected based on shared information

Elements

- System box
  - Represents the boundaries of your system
  - Actors should all be external to the system and thus outside of the system box
  - Labeled with the system name

- Actors
  - Represents a role (much like an external entity in a DFD/use case)
  - Not a complete match with your external entities in the DFD
  - Actors can be superclasses or subclasses of one another - the subclass inherits the characteristics of the superclass

Elements

- Use cases
  - Major piece of system functionality
  - The same use cases we've been using all semester
    - However, those use cases were a subset of all potential use cases in the case
    - I would recommend adding more use cases that you think could fit into the case here
    - Splitting use cases is a good way to accomplish this

- Actor/use case relationships
  - Links actors and use cases
  - Has a * at each end to represent multiplicity (how many times can a customer do this? How many users can this be done for?)
  - For some reason, this is always a * at each end
  - Actors are linked with use cases that they participate in

Elements

- Use case relationships
  - Use cases can extend or include another use case
  - Labelled «extends» or «includes»
  - The arrow directions are reversed for each one (yes, it's very confusing)
  - If a use case is extended or inclusive of another, the actor only needs to connect to one of them

«extends» and «includes»

- «extends» shows that a use case can be used by or is used by the use cases it points to, but not necessarily every time
  - Once you have enrolled in university, you **may** choose your for classes
  - [Enroll in university] <---«extends»--- [Choose classes]
- «includes» means that when one use case is initiated, all the use cases that include it (and are pointing towards it) must also be completed (at that time, and every time that use case is initiated)
  - In order to make a purchase, you **must** update your information first
  - [Make purchase] ---«includes»---> [Update information]
  - Can also be written as «uses»

Textbook Pages

- 5th Edition: page 516 - 521
- 6th Edition: page 439 - 443

Example

Example

- Student information system
- Use cases
  - Register for university
  - Choose class
  - Drop class
  - Create class

Assignment

Instructions

- Use MS-VISIO to draw the Use Case Diagram that corresponds with the description of the system.