Lab 1 — Object-Oriented Design

CS 205

Lab objectives:

- Design classes and the relationships between them for a small problem

- Document classes and their relationships with CRC and UML diagrams

You will step through a small design of a problem with CRC cards and UML.

1. Here is the problem description:

    Design and implement a program that simulates a vending machine. Products can be purchased by inserting the correct number of coins into the machine. A user selects a product from a list of available products, adds coins, and either gets the product or gets the coins returned if insufficient money was supplied or if the product is sold out. Products can be restocked and money removed by an operator.

2. With a stack of index cards, describe classes for the problem, recording responsibilities and dependent classes on the cards.

3. Use your cards to walk through several user scenarios. Don't be afraid to tear up your designs and start fresh or go through several iterations before you find a design that works well.

4. Launch Violet and create a new class diagram and document your design in UML. It's pretty easy to achieve something like this:
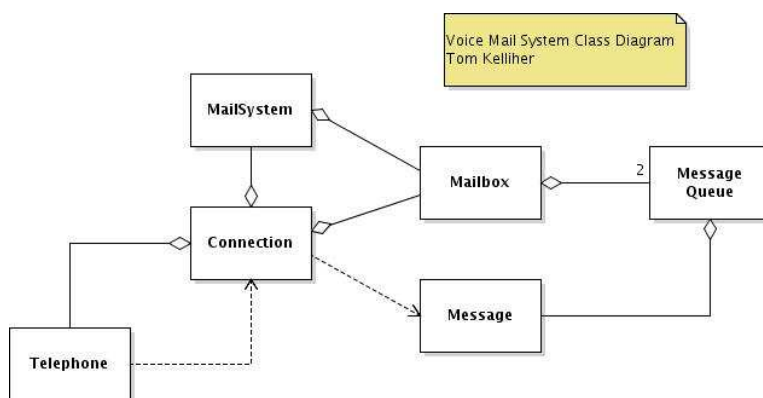
    once you realize that you can right-click on nodes and edges, and then edit properties. Once you finish your UML diagram, save it.

5. Submit a copy of your UML design using Canvas.