Warm up discussion problem:

Suppose that you are standing in a hallway next to 3 light switches, which are all off. There is another room down the hallway, where there are 3 incandescent light bulbs - each light bulb is operated by one of the switches in the hallway. Because the light bulbs are in another room, you can not see them since you are standing in the hallway. How would you figure out which switch operates which light bulb, if you can only go the room with the light bulbs one time, and only one time?

Workshop:
Object-Oriented Design

1. Write a program to keep track of conference attendees. For each attendee, your program should keep track of name, company, state, and email address. Your program should allow users to do things such as add a new attendee, display info on an attendee, delete an attendee, list the name and email addresses of all attendees, and list the name and email address of all attendees from a given state. The attendee list should be stored in a file, loaded when the program starts and saved when the program exits.

   Be sure to follow the OOD strategy lined out in lecture. Once you have designed the class (or classes) needed to represent the data in the problem (AKA, the model), start thinking about the user interface, that is, how the user interacts with the program. Start with a simple, text based interface.

2. Design a class named `Stock` to represent a company's stock that handles:

   (a) The stock's symbol (a string)

   (b) The stock's name (a string)

   (c) The previous day stock price (a float)

   (d) The stock price for the current time (a float)

   (e) A constructor method (`__init__()`) that initializes things

   (f) Way(s) to get the stock name

   (g) Way(s) to get the stock symbol

   (h) The ability to get/set the stock's previous price

   (i) The ability to get/set the stock's current price

      (j) The ability to get the percentage change in the stock price

3. Design a class named `Fan` to represent a fan. The class should:

      (a) Constant values for three speeds: SLOW, MEDIUM, and FAST

      (b) Store its current speed of the fan

      (c) Store whether the fan is either on or off

      (d) Store the radius of the fan

      (e) Store the color of the fan

      (f) The ability to get and set the previous four data values of the fan

      (g) A constructor that creates a fan with the specified speed (default SLOW), radius (default 5), color (default blue), and on (default `False`). [Hint: Youd be using keyword arguments to your constructor]

4. Can you, as a group, devise a class on your own to model a problem/real-world object suited for object-oriented design? Again, feel free to use the OOD strategy lined out in class.