**Student Name/Grade: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Rubric:**

\_\_\_\_\_\_ / 10 Randomly makes one of the doors a winner

\_\_\_\_\_\_ / 10 Correctly reveals a useless door

\_\_\_\_\_\_ / 5 Allows user to stick or switch properly

\_\_\_\_\_\_ / 10 Lets user play again, keeps track of stats

\_\_\_\_\_\_ / 5 Formatting/comments/variable names

\_\_\_\_\_\_ / 10 Assignment submitted correctly and on time

\_\_\_\_\_\_\_ Total

**Description:**

Create a simulator for the Monty Hall Problem that we discussed in class. Create a list for 3 doors, and randomly make one of them contain a prize of your choice and the other two contain something stupid (a goat, a lump of coal, whatever. Up to you). Then ask the user to choose a door. After they do, reveal one of the other two doors to be useless (if both of the other doors are useless, randomly pick which one to reveal), then ask the user if they’d like to stick with their first choice or switch (**HINT**: this is the hardest part of this project. Think about how you dealt with bad draws in the skydiving projects as a guide). Tell them if they won or not, then ask if they’d like to keep playing. If they do, keep a running tally of wins, losses, times stuck, and times switched. The output should look something like this: (bold text is what the user will enter)

Choose a door: 0, 1, or 2.

**2**

Door 1 is useless. Stick or switch?

**Switch**

You won a bag of skittles.

Wins: 1

Losses: 0

Stick: 0

Switch: 1

Play again? Y/N

**Y**

Choose a door: 0, 1, or 2.

…and so on.

**Hint:** have the program print out the contents of the list at the start while you’re testing your code. It’ll be easier to know if it’s working if you know where the winning door is.

Comment your code as usual and email it to me with the subject line **[ICS] Week 13 LastName.**