

CIT 149: Java I

Chapter 4

Programming Assignment 2

In this assignment you are to complete #10 under Exercises on page 249. You are to use a for loop that will be run 8 times. Within the loop you will ask the user to enter "h" or "t". If the user enters "h" add one to a variable for heads. If the user enters "t" add one to a variable for tails. You can accomplish this task using if statements within the loop. One thing though, if the user enters something other than "h" or "t" they are to receive an error stating that they must enter "h" or "t" and you will have to decrease the increment set in the for loop by one. For example:

```
else
{
    System.out.println("Incorrect toss. You must enter either h or t");
    i--;
}
```

In order to get the correct result when dividing the number of heads and tails by 8 you will need to use the formulas of:

```
percentageHeads=(double)heads/8;
percentageTails = (double)tails/8;
```

This is if you use the same names as I did for the variables. If you do not cast the variables for heads and tails you will receive zero because Java will round down.

When displaying the correct percentage multiply it by 100 in order to get a whole number.

In this case I use a variable named *i* in my for loop. Since the variable for the toss will be a String variable you will need to use the equalsIgnoreCase() in your if statement in case the user enters upper or lowercase, see page 152 in your book.

The following are possible screen shots:

```
CA. C:\Windows\system32\cmd.exe
For each coin toss enter either h for heads or t for tails
Toss 1
```

Here I entered e and as a result I received an error message. Notice that I am asked to enter Toss 1 again because I decreased the variable *i* by 1.

```
CA. C:\Windows\system32\cmd.exe
For each coin toss enter either h for heads or t for tails
Toss 1
e
Incorrect toss. You must enter either h or t
Toss 1
h
Toss 2
t
Toss 3
t
Toss 4
h
Toss 5
t
Toss 6
h
Toss 7
t
Toss 8
t
Percent heads: 37.5
Percent tails: 62.5
Press any key to continue . . .
```

Compress both the class and java file into a single zip or rar file and submit to the appropriate drop box.