PRACTICE WITH SELECTION

CS 125

Working with a partner/group, use the following steps to solve each of the following problems.

(a) Plan your function on the white board (either on the classroom wall or on Zoom). Write out your entire program. Think about what errors might occur and how to fix them.

(b) Plan multiple test cases for your function. What input will you send to your function? What value should the function return?

(c) *Only after you have completed steps (a) and (b) should you type your code in Python.*

(d) After you have typed your function, run your test cases. Does your function work? If not, how can you fix it?

Here are the practice problems:

1. Write a function `decimalToPercent(d)` that accepts a number *d* as a parameter. If the number is between 0 and 1 (inclusive), then your function prints the number as a percent (that is, multiply *d* by 100 and print a percent sign). Otherwise, the program prints the message "You entered a number that is not between 0 and 1."

2. Write a function `triangleOrSquare()` that prompts the user to enter either "triangle" or "square". If the user enters "triangle", then your function draws a triangle. If the user enters "square", you're your function draws a square. Otherwise, the your function prints an error message.

3. Write a function `maxNum()` that prompts the user to enter three numbers and returns the largest of the three numbers.

4. Write a function `weekday()` that asks the user for the name of a weekday, such as `"Monday"` or `"Thursday"`. If the user does not enter a valid day name, then print an error message. Otherwise, then tell the user whether *today* is the day of the week that they entered. To do this, use the `datetime` module to get the current day of the week as follows:

```
import datetime
dayOfWeek = datetime.date.today().strftime("%A")
```

5. Write a program `isPrime(n)` that takes a positive integer `n` and returns `True` if `n` is prime and `False` otherwise.