Credit Name: CSE 2110 Procedural Programming 1

Assignment Name: PrimeNumber Part A

How has your program changed from planning to coding to now? Please explain?

I began by importing scanner to prepare for user input

```
//preparing for user input
Scanner input = new Scanner(System.in);
```

Prompted user to enter a integer number, and recorded user input in a new declared variable "num".

```
//Prompt user for number, and record user input in new variable "num"
System.out.println("Please enter any whole number: ");
int num = input.nextInt();
```

Declared and initialized variable "prime" as 0; if the number is prime, it will remain as 0 later on.

```
//declare and initialize variable
int prime = 0;
```

Using a for loop, test each int between 2 and num. We do not test for 1 and num itself because it will always be true in context.

if the remainder of num divided by i is equal to 0, this means that the number is not prime since it can be divided by other #'s other than 1 and itself.

Thus, set prime to 1, to differenciate between prime (0) and non-prime data.

Break to end loop. We do not need to test any more if one value has already succesfully divided into num.

```
//for each int number between 2 and num; (i):
for (int i = 2; i<num; i ++) {
    if (num % i == 0) { //if remainder of num divided by i = 0,
    prime = 1; //set prime variable as 1
    break; //end loop
    }
}
```

Check if prime is equal to 1. If TRUE, print "non-prime" message. if FALSE, print "Prime" message.

```
if (prime == 1) { //if prime is equal to 1
    System.out.print("Your number is NOT a prime number."); //print "non-prime" message
}
else {
System.out.print("Your number IS a prime number!"); //else, print "prime" message
}
```