

Credit Name: CSE 2110 Procedural Programming 1

Assignment: PrimeNumberCh6

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

```
19 public static String isPrime(int num)
20 {
21     int i=1, remainder=1;
22     do
23     {
24         i+=1;
25         remainder = num%i;
26     }while(remainder != 0 && i<=7);
27
28     //At the end if remainder is nonzero or num is equal to divide
29     if((remainder != 0 || num == i) && num != 1 )
30     {
31
32         System.out.println("The number is Prime.");
33     }
34     else if (num == 1)
35     {
36         System.out.print("The number is not Prime.");
37     }
38
39     else
40     {
41         System.out.println("The number is not Prime.");
42     }
43 }
```

In my method isPrime, I have one parameter which refers to the number the user will check to see if it is prime or not. The method will return a string To figure out whether or not the number is prime, I found the remainder of the user's number divided by integers 2-7. Only division by these numbers is required to see if it is prime (4 and 6 are not required but are included to keep code simple).

While computing these remainders, if a remainder is zero, the loop ends, and the remainder goes through the following if-else loop and comes out as not prime. If the number is the same as the i-value the number comes out as prime. If the remainder is not zero after then the number comes out as prime. There is only one exception which is the number 1 which is not prime.

```
public static void main(String[] args)
{
    //Declaring number the user will enter
    int num;

    Scanner input = new Scanner(System.in);

    //Asking for user's number
    System.out.print("Enter a number to check if it is prime: ");
    num = input.nextInt();

    input.close();

    //access isPrime Method;

    isPrime(num);
}
```

Main method gets the integer from the user and then runs the method to check if it is prime.