

Credit Name: CSE2140 2nd Language Programming

Assignment Name: Prime Number Mastery

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

Declared the variable type as integer as I am dealing with numbers.

```
//Declaration area  
int userNum, prime;
```

Prepared for user to input an answer.

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

Prompted user to enter an integer and initialized it under the variable userNum. Initialized another variable named prime as the userNum.

```
//Prompt user to input an integer and initialize variables  
System.out.print("Please enter an integer: ");  
userNum = userInput.nextInt();  
prime = userNum;
```

Used a while loop to check if userNum is prime. Loop will continue while prime is greater than 0. Each time it loops, subtract 1 from prime. If userNum divided by prime has a remainder that is not 0, repeat the above (subtract 1 from prime) until the remainder is not 0. If prime is equal to 1, display that the number is prime to the user and break out of the loop. Else display that the number is not prime and break out of the loop.

```
//Check if the user input is a prime number and display the answer  
while (prime > 0) {  
    prime --;  
    if (userNum % prime != 0) {  
        continue;  
    }  
    else if (prime == 1) {  
        System.out.print(userNum + " is a prime number.");  
        break;  
    }  
    else {  
        System.out.print(userNum + " is not a prime number.");  
        break;  
    }  
}
```

