ReflectionLog: PrimeNumber

Youdis

```
package Mastery;

import java.util.Scanner;

public class PrimeNumber {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        //creating new scanner to record user input
        Scanner Input = new Scanner(System.in);
        //prompt user to enter a number
        System.out.print("Please enter a number: ");
        //record number entered
        int userNum = Input.nextInt();
```

Creating a scanner object to record inputs then prompting the user to enter a number and store it inside a variable.

```
// initializing variable that will record whether number entered is prime or not
boolean prime = true;
//checking if number is 1 or 0 as these won't work in for loop as they are lower than 2
if (userNum == 0 || userNum == 1) {
//if 1 or 0 then set prime as false
    prime = false;}
```

Initializing variable that will help record whether the number is prime or not, and then check if the number is either 1 or 0 as those are not prime numbers.

```
// for loop to divide number entered by every number from 2 to half of the number
for (int i = 2; i <= (userNum/2); i++) {
    // checking if number is fully divisible
    if (userNum % i == 0) {
    // if it is fully divisible by a number then set prime to false
        prime = false;}
    }
```

Using a for loop to divide the number entered by every number from 2 to half of the number, if it is fully divisible by any of the numbers the loop will go through then the prime variable will be changed to false, if not it will stay true.

```
// checking if prime is true or not
if (prime) {
// if prime is true then number was a prime number and will output that to user
System.out.print(userNum + " is a prime number");}
// if prime is false then number was not a prime number and will output that to user
else {System.out.print(userNum + " is not a prime number");}
```

Using if statement to check whether the prime variable was true or not, if it was true then will output that number entered is a prime number, if it isn't then will output number entered is not a prime not a prime number