

Reflection Log PrimeNumber

```
public static void main(String[] args) {  
    Scanner scanner = new Scanner(System.in);
```

Initializing a scanner to read the users input information/values in the program.

```
//prompt the user for a number  
System.out.print("Please enter a number greater than 1: ");  
int number = scanner.nextInt();  
  
//check if the number is prime using the isPrime() method  
boolean isPrimeNum = isPrime(number);
```

The code prompts the user to enter a number greater than 1, reads that number, and checks if it is prime using the isPrime() method.

```
//display the result.  
if (isPrimeNum) {  
    System.out.println(number + " is a prime number.");  
} else {  
    System.out.println(number + " is not a prime number.");  
}
```

The code checks the value of isPrimeNum to determine if the number is prime. If it is true, it displays a message stating that the number is a prime number; otherwise, it indicates that the number is not a prime number.

```
//method to check if a number is prime
public static boolean isPrime(int num) {

    //a prime number is greater than 1
    if (num <= 1) {
        return false;
    }
}
```

The code defines a method named `isPrime` that checks if a number is prime. It begins by confirming that a prime number must be greater than 1, and if the input number is less than or equal to 1, it returns `false`, indicating that the number is not prime.

```
//check for factors from 2 to the square root of num
for (int priNum = 2; priNum <= Math.sqrt(num); priNum++) {
    if (num % priNum == 0) {

        //not prime if evenly divisible.
        return false;
    }
}
//it's prime if no factors were found
return true;
```

The code checks if the number `num` is less than or equal to 1, and if so, it returns `false`. This indicates that the number is not prime, as prime numbers must be greater than 1.