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COSC 117 Lab 7 Report

Example 1: Sum of numbers

1. Source code:

NumSum.java

```java
import java.util.Scanner;

public class NumSum {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner keyboard = new Scanner (System.in);
        System.out.print("Please enter a positive integer: ");
        int a = keyboard.nextInt();
        keyboard.close();
        System.out.print("The sum is: " + numSum(a));
    }
    public static int numSum(int n) {
        int sum = 0;
        for (int i = 1; i <= n; i++) {
            sum += i;
        }
        return sum;
    }
}
```

2. Output:

Problems @ Javadoc Declaration Console

<terminated> NumSum [Java Application] C:\Users\jpmd1

```
Please enter a positive integer: 5
The sum is: 15
```

Example 2: Average of odd numbers

1. Source code:

AvgOdd.java

```java
import java.util.Scanner;

public class AvgOdd {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner keyboard = new Scanner (System.in);
        System.out.print("Please input a positive integer: ");
        int a = keyboard.nextInt();
        keyboard.close();
        System.out.print("The average is: " + avgOdd(a));
    }
    public static double avgOdd(int n) {
        double total = 0;
        int a = 1, b = 0;
        for (a = 1; a <= n; a++) {
            if (a % 2 != 0) {
                total = total + a;
                b++;
            }
        }
        return total/b;
    }
}
```

2. Output:

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<terminated> AvgOdd [Java Application] C:\Users\jpmd1

```
Please input a positive integer: 4
The average is: 2.0
```

Example 3: Calculating the factorial of a number

1. Source code:

Factorials.java

```java
import java.util.Scanner;

public class Factorials {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner keyboard = new Scanner (System.in);
        System.out.print("Input a positive integer: ");
        int a = keyboard.nextInt();
        keyboard.close();
        System.out.println("The factorial of " + a + " is " + factNum(a));
    }
    public static int factNum(int n) {
        int num = 1;
        for (int i = 1; i <= n; i++) {
            num = num * i;
        }
        return num;
    }
}
```

2. Output:

Problems Javadoc Declaration Console

```
<terminated> Factorials [Java Application] C:\Users\jpmd
Input a positive integer: 5
The factorial of 5 is 120
```

Example 4: Multiples of n

1. Source code:

Multiples.java

```java
import java.util.Scanner;

public class Multiples {

    public static void main(String[] args) {
        // TODO Auto-generated method stub
        Scanner keyboard = new Scanner (System.in);
        System.out.print("Input a positive integer: ");
        int a = keyboard.nextInt();
        keyboard.close();
        System.out.println("The multiples of " + a + " are: ");
        System.out.println(multNum(a));
    }
    public static int multNum(int n) {
        int num = 1;
        for (int i = 1; i < 1000; i++) {
            if (num % n == 0) {
                System.out.println(num);
                num++;
            }
            else {
                System.out.print("");
                num++;
            }
        }
        return num;
    }
}
```

2. Output:

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<terminated> Multiples [Java Application] C:\Users\jpmd1

```
Input a positive integer: 50
The multiples of 50 are:
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
```