Lab Assignment: 1

Flowchart and Java Programming

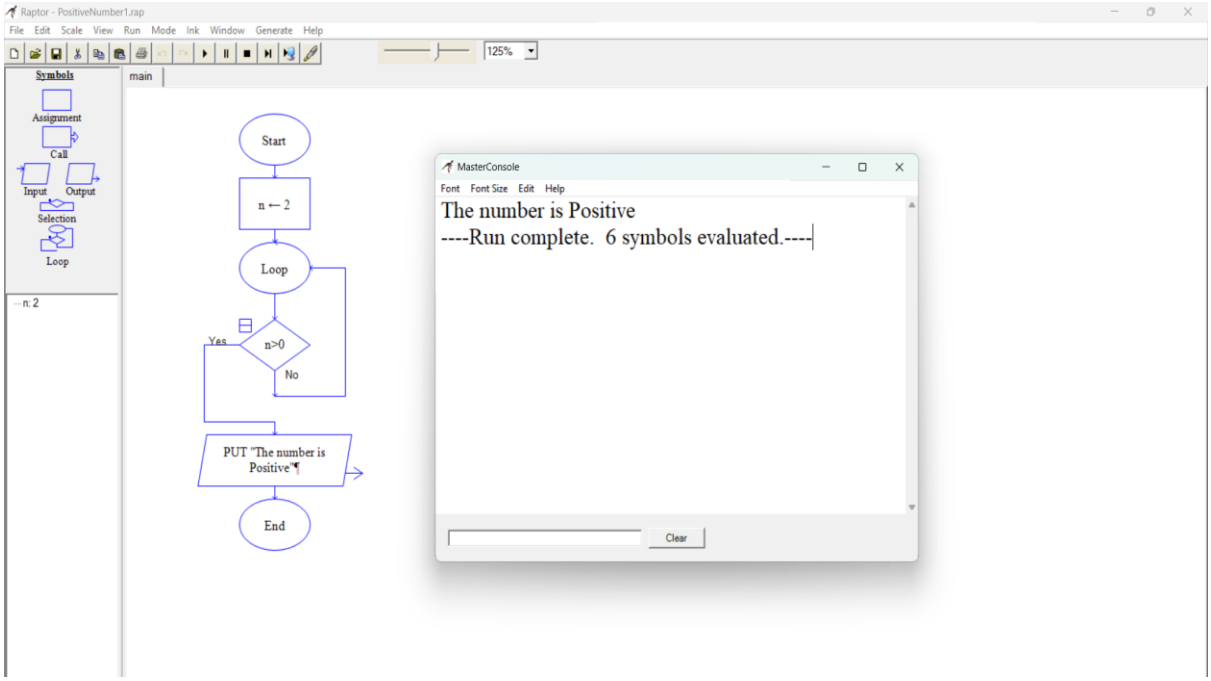
1. Check Positive Number:

• Task: Create a flowchart to check whether a number is positive.

• Next Step: Write a Java program that checks if a predefined number is positive using an

if-else statement and prints the appropriate message.

Flow Chart:-



Code:-

```
class Positive
{
   public static void main(String[] args)
   {
      int n = 2;
      if(n>0){
         System.out.println("The number is positive");
      }
   }
}
```

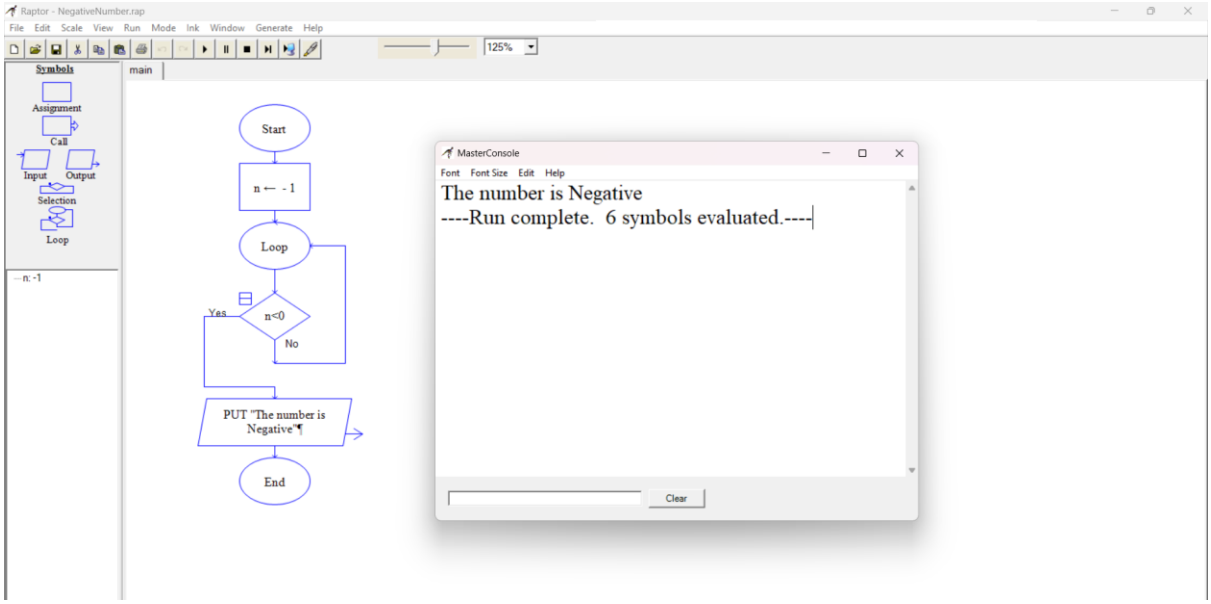
2. Check Negative Number:

• Task: Create a flowchart to check whether a number is negative.

• Next Step: Write a Java program that checks if a predefined number is negative using an

if-else statement and displays the result.

Flow Chart:-



Code:-

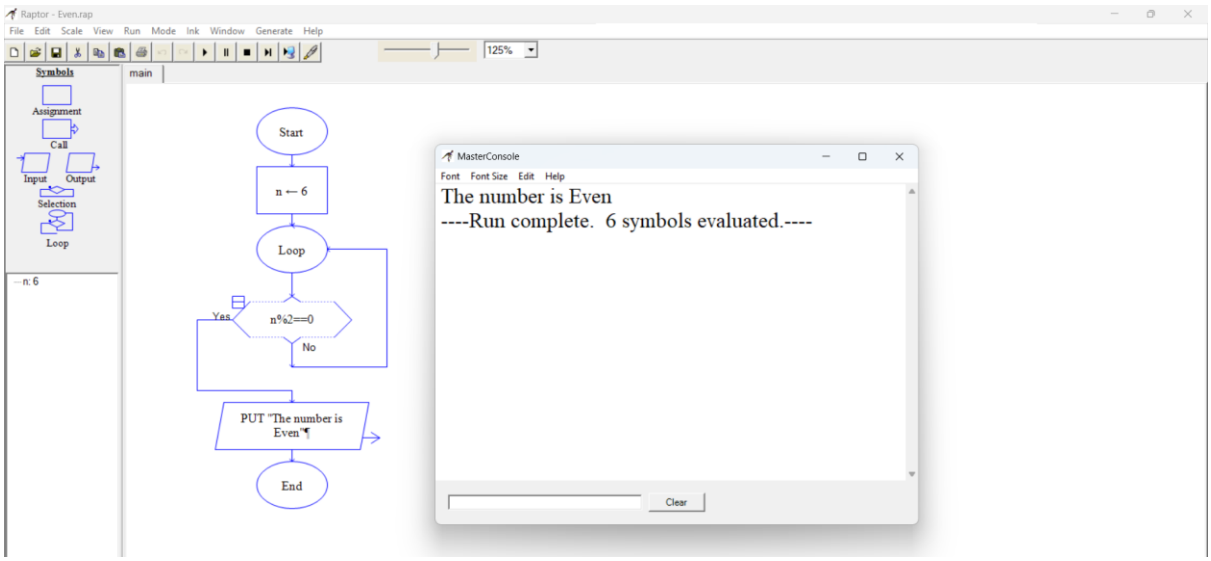
```
public class Negative {
    public static void main(String[] args)
    {
        int n = -4;
        if(n<0){
            System.out.println("The number is Negative");
        }
    }
}
```

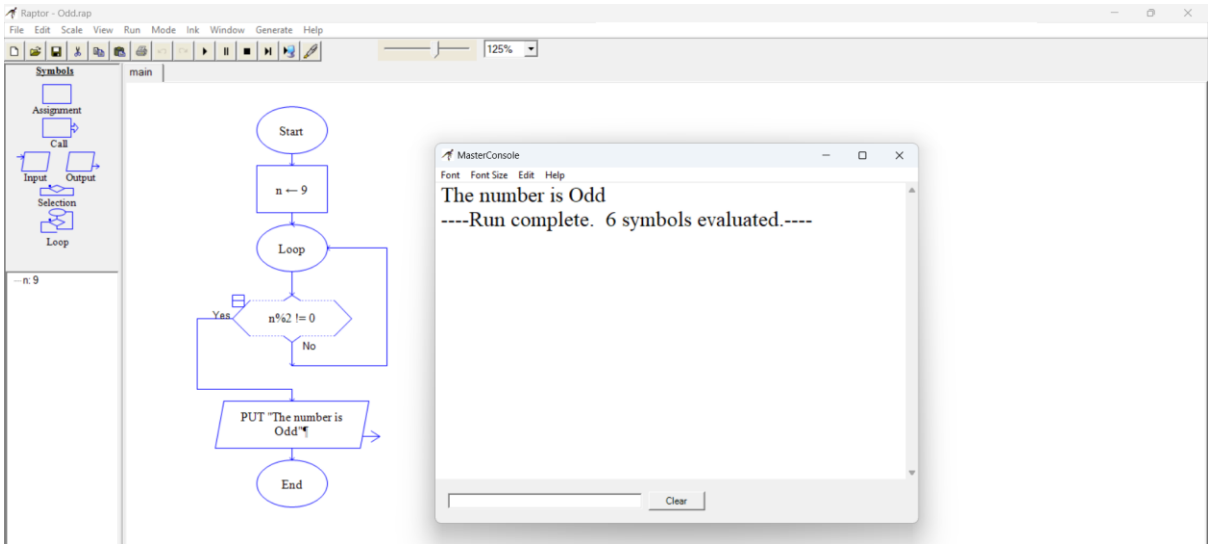
3. Check Odd or Even Number:

• Task: Create a flowchart to determine whether a number is odd or even.

• Next Step: Write a Java program that checks if a predefined number is odd or even. Use an if-else statement and the modulus operator (%) to determine whether the number is divisible by 2 or not.

Flow Chart:-





Code:-

```
public class EvenOdd {
    public static void main(String[] args) {
        int n = 4;
        if(n%2==0){
            System.out.println("The number is Even");
        }
        else{
            System.out.println("The number is Odd");
        }
    }
}
```

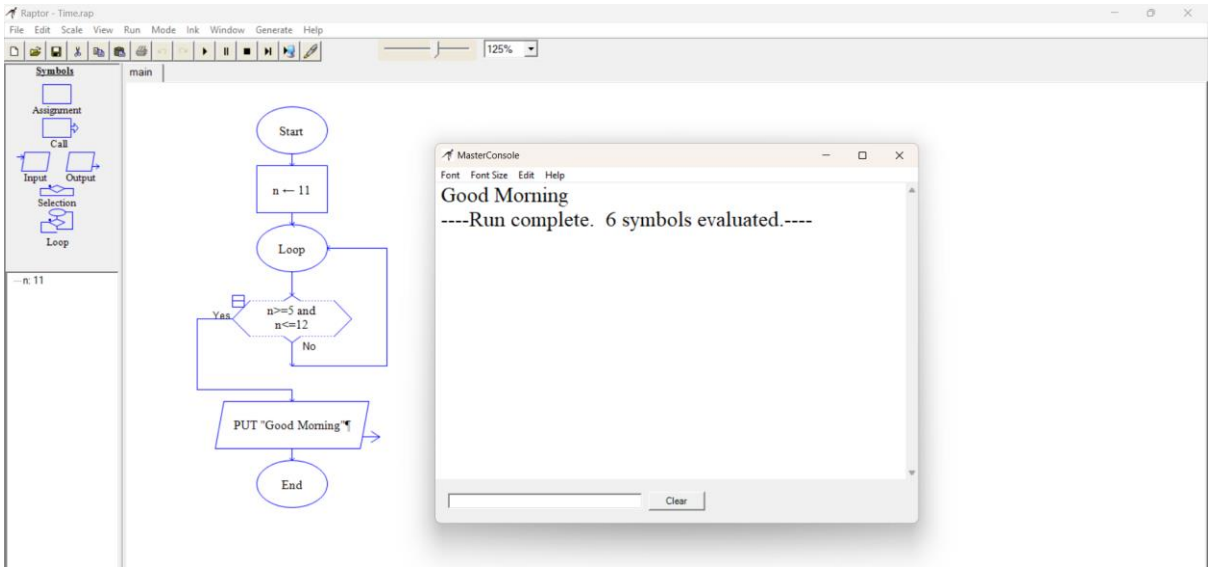
4. Display Good Morning Message Based on Time:

• Task: Create a flowchart to display a "Good Morning" message based on a given time.

• Next Step: Write a Java program that displays a "Good Morning" message if the

predefined time is between 5 AM and 12 PM. Use an if statement to implement the logic.

Flow Chart:-



Code:-

```
public class Time {
    public static void main(String[] args) {
        int n=6;
        if(n>=5 || n<=12)
        {
            System.out.println("Good Morning");
```

```
        }
    }
}
```

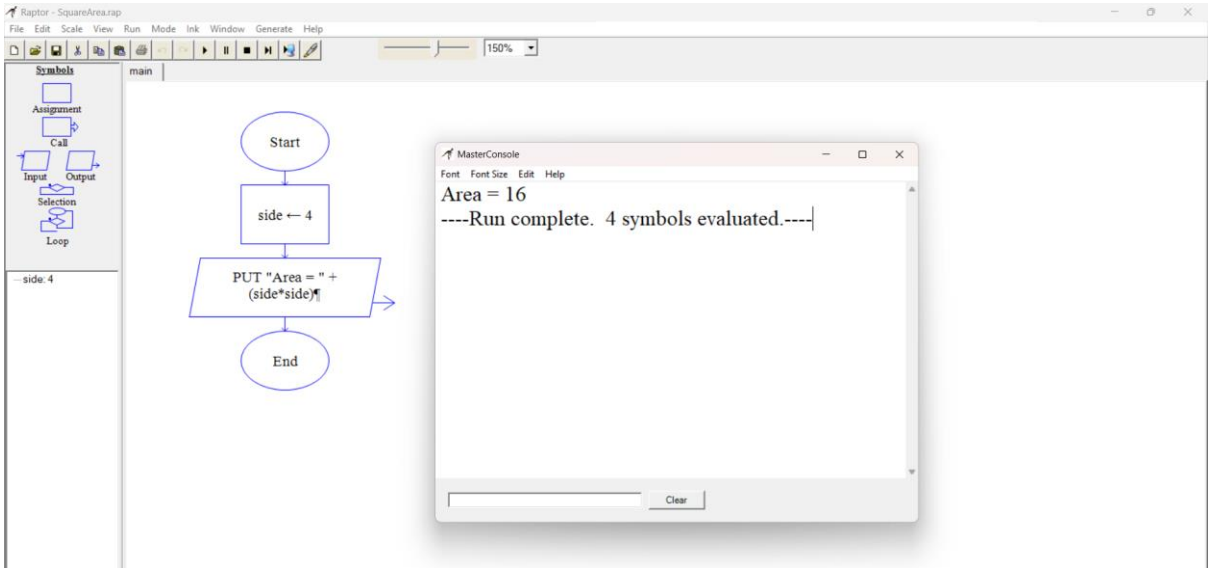
5. Print Area of a Square:

• Task: Create a flowchart to calculate and print the area of a square.

• Next Step: Write a Java program that calculates the area of a square using the formula

area = side * side. Use a predefined side length.

Flow Chart:-



Code:-

```
public class SArea {
    public static void main(String[] args) {
        int s = 12;
```

```
        System.out.println("Area of Square : " + s*s);
    }
}
```

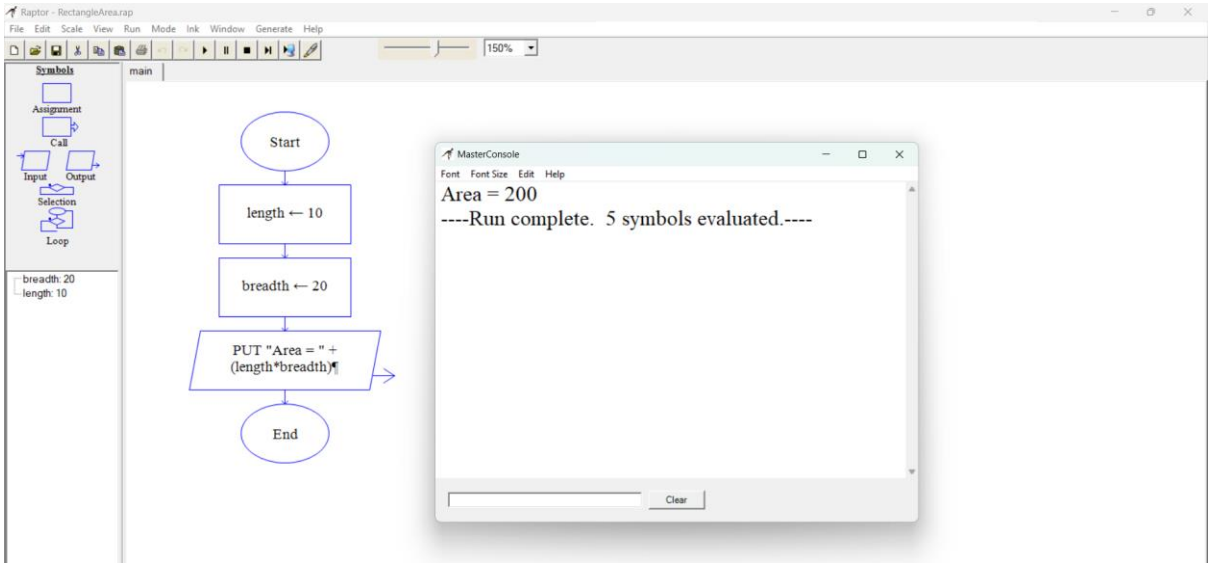
6. Print Area of a Rectangle:

• Task: Create a flowchart to calculate and print the area of a rectangle.

• Next Step: Write a Java program that calculates the area of a rectangle using the formula

area = length * width. Use predefined values for length and width.

Flow Chart:-



Code:-

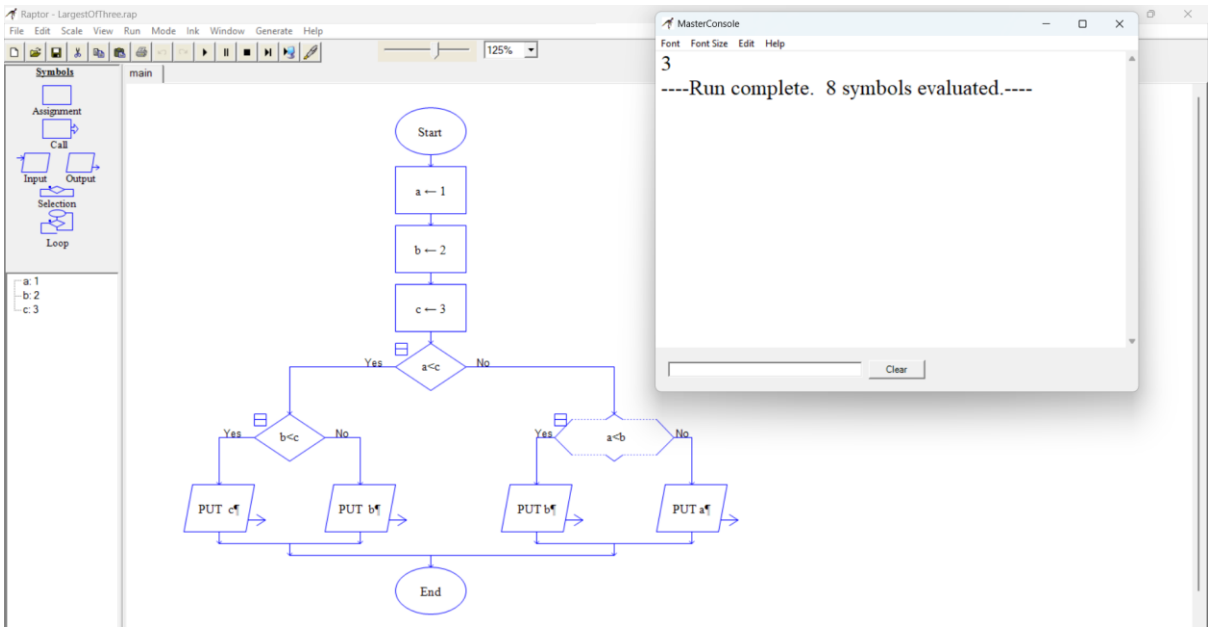
```
public class RSquare {
    public static void main(String[] args) {
        int l = 12;
        int b = 10;
        System.out.println("Area of Rectangle : " + l*b);
    }}
```

7. Find the Largest of Three Numbers:

• Task: Create a flowchart to find the largest of three numbers.

• Next Step: Write a Java program that finds and prints the largest of three predefined numbers using if-else statements.

Flow Chart:-



Code:-

```
public class LargestOfThree {
    public static void main(String[] args) {
        int a = 10;
        int b = 20;
        int c = 30;

        if(a<c){
            if(b<c){
                System.out.println(c);
            } else {
                System.out.println(b);
            }
        }
        else {
            if(a<b){
                System.out.println(b);
            }
            else{
                System.out.println(a);
```

```
        }
    }
  }
}
```