

SWT 12031: Practical for Object oriented Program
Department of Information and Communication Technology
Faculty of Technology

Java Basics

Labsheet 02

Reg. Number: SEU/IS/20/ICT/084

Academic Year :2020/2021

Date: 2023.01.24

Practical No : 02

Title: Java Basics

Aims:

- Practice with Java Basics programming Language environment preparation

Tasks 01:

Java User Input String

```
import java.util.Scanner;

class Main {

    public static void main(String[] args) {

        Scanner myObj = new Scanner(System.in);

        String userName;

        System.out.print("Enter username :");

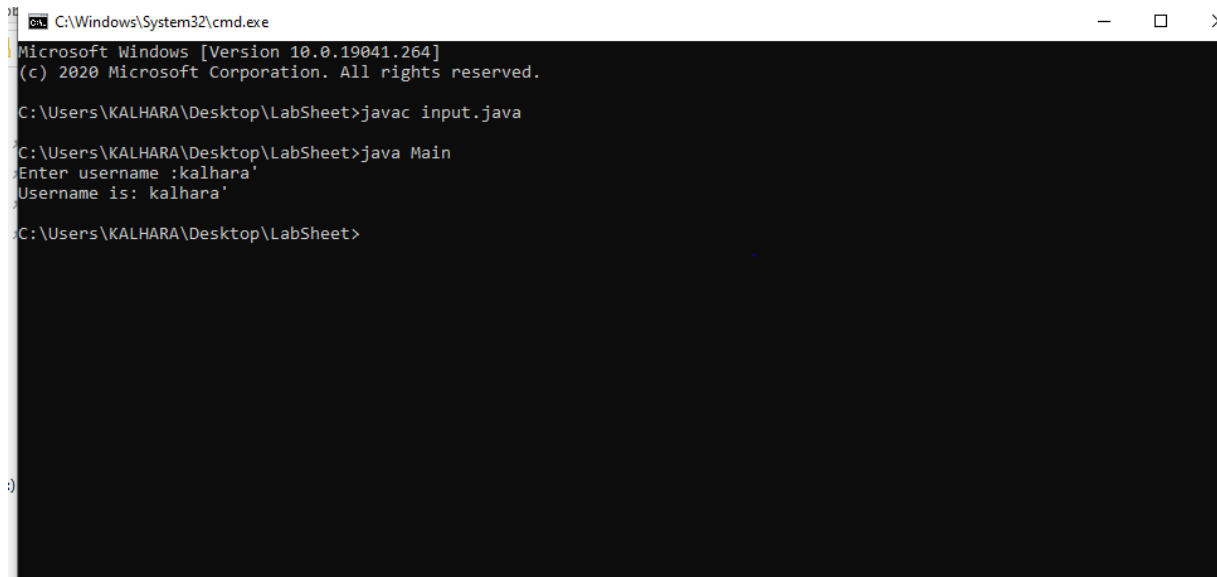
        userName = myObj.nextLine();

        System.out.println("Username is: " + userName);

    }

}
```

Output:



```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19041.264]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\KALHARA\Desktop\LabSheet>javac input.java

C:\Users\KALHARA\Desktop\LabSheet>java Main
Enter username :kalhara'
Username is: kalhara'

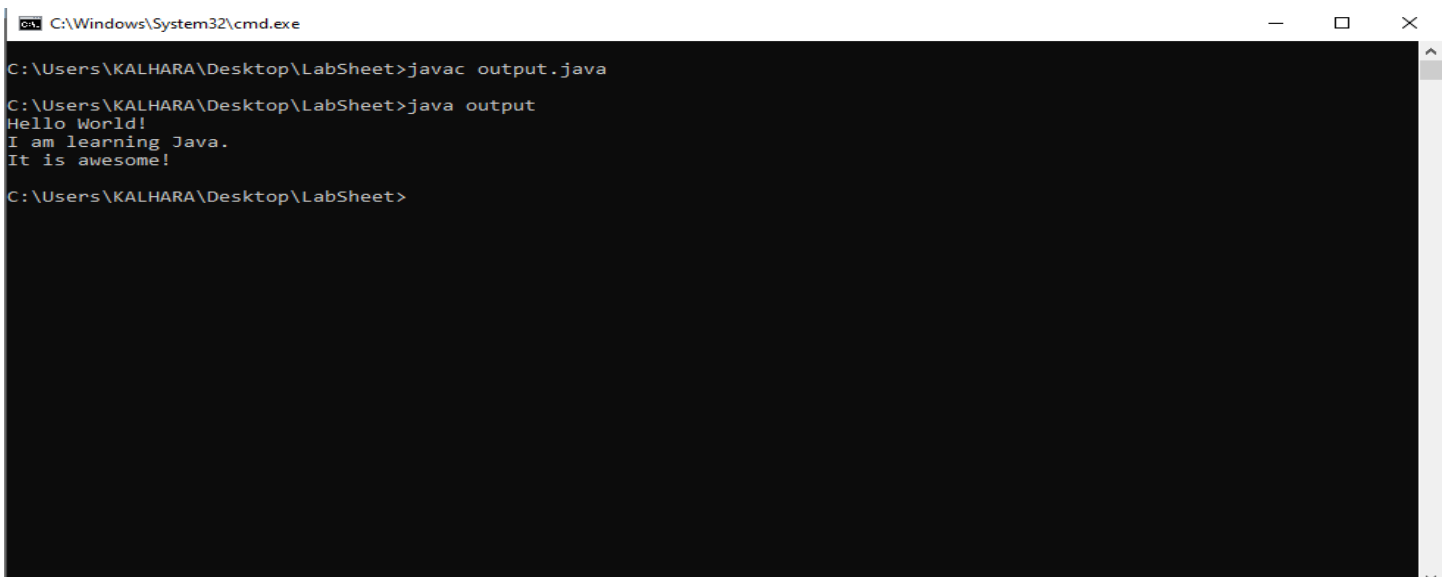
C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 02:

Java Output / Print Text

```
public class output {
    public static void main(String[] args) {
        System.out.println("Hello World!");
        System.out.println("I am learning Java.");
        System.out.println("It is awesome!");
    }
}
```

Output:



```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac output.java

C:\Users\KALHARA\Desktop\LabSheet>java output
Hello World!
I am learning Java.
It is awesome!

C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 03:

Java Output Numbers

```
public class Main {  
    public static void main(String[] args) {  
        System.out.println(3);  
        System.out.println(358);  
        System.out.println(50000);  
    }  
}
```

Output:



The screenshot shows a Windows command prompt window titled "C:\Windows\System32\cmd.exe". The prompt is at "C:\Users\KALHARA\Desktop\LabSheet>". The user enters "javac Main.java" and presses Enter. The prompt changes to "C:\Users\KALHARA\Desktop\LabSheet>". The user then enters "java Main" and presses Enter. The output of the program is displayed on three lines: "3", "358", and "50000". The prompt returns to "C:\Users\KALHARA\Desktop\LabSheet>".

```
C:\Windows\System32\cmd.exe  
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
3  
358  
50000  
C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 04:

Java Comments

01.Single-line Comments

```
public class Main {  
    public static void main(String[] args) {  
        // This is a comment  
        System.out.println("Hello World");// This is a comment  
    }  
}
```

Output:

```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

C:\Users\KALHARA\Desktop\LabSheet>java Main
Hello World

C:\Users\KALHARA\Desktop\LabSheet>
```

02. Java Multi-line Comments

```
public class Main {

    public static void main(String[] args) {

        /* The code below will print the words Hello World
        to the screen, and it is amazing */

        System.out.println("Hello World");

    }

}
```

Output:

```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

C:\Users\KALHARA\Desktop\LabSheet>java Main
Hello World

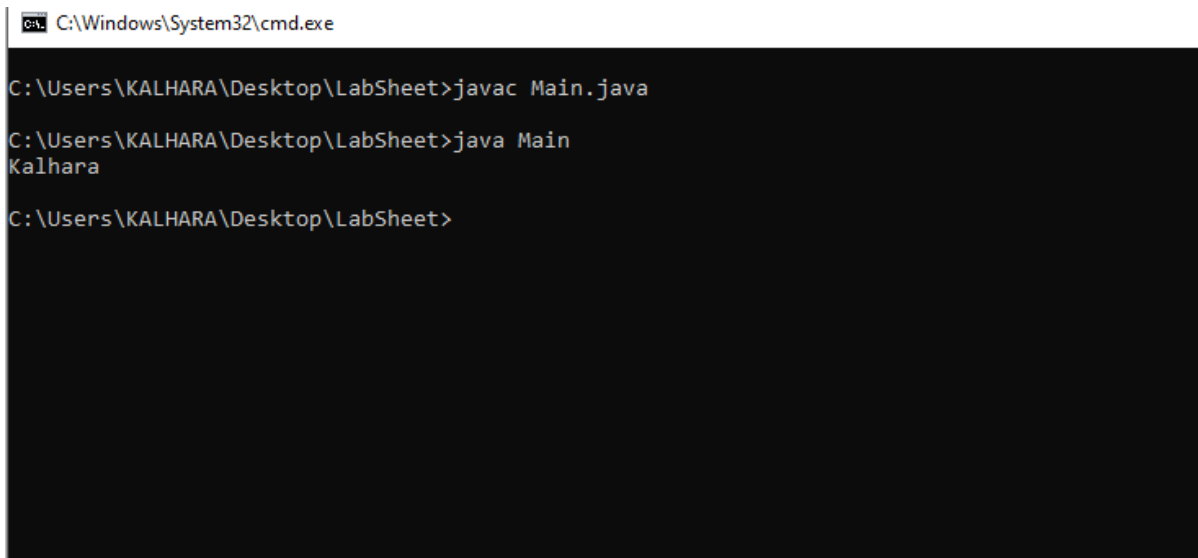
C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 05:

Java Variables String

```
public class Main {  
    public static void main(String[] args) {  
        String name = "John";  
        System.out.println(name);  
    }  
}
```

Output:



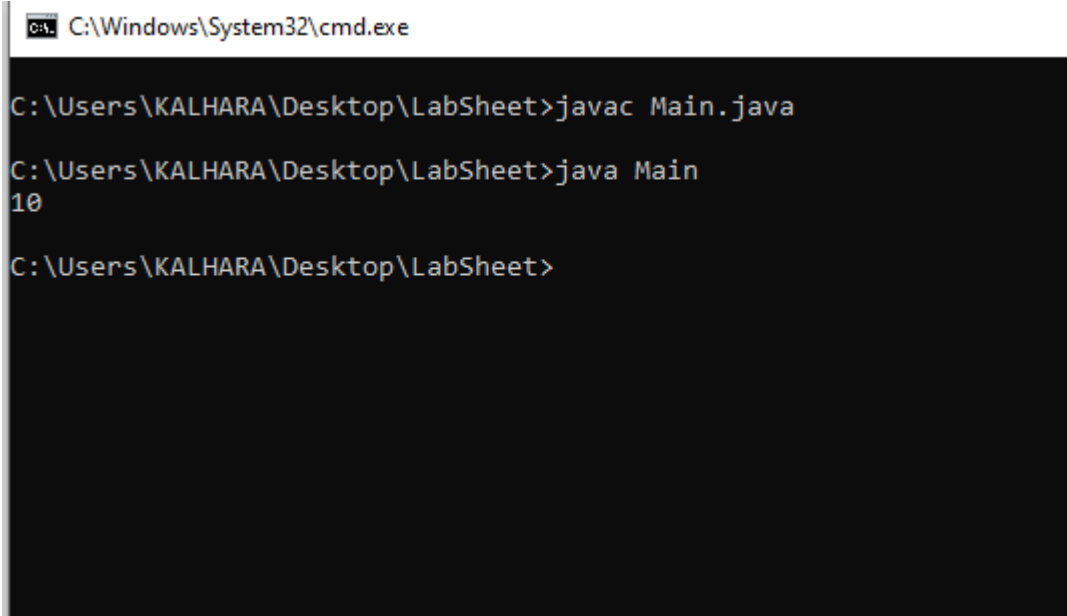
```
C:\Windows\System32\cmd.exe  
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
Kalhara  
C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 06:

Java Variables Numbers

```
public class Main {  
    public static void main(String[] args) {  
        int myNum;  
        myNum = 10;  
        System.out.println(myNum);  
    }  
}
```

Output:



```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

C:\Users\KALHARA\Desktop\LabSheet>java Main
10

C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 07:

Java Variables Multiple Numbers

```
public class Main {  
    public static void main(String[] args) {  
        int myNum = 15;  
        myNum = 20; // myNum is now 20  
        System.out.println(myNum);  
    }  
}
```

Output:

C:\Windows\System32\cmd.exe

```
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java
```

```
C:\Users\KALHARA\Desktop\LabSheet>java Main
20
```

```
C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 08:

Display Variables

```
public class Main {  
    public static void main(String[] args) {  
        String firstName = "John ";  
        String lastName = "Doe";  
        String fullName = firstName + lastName;  
        System.out.println(fullName);  
    }  
}
```

Output:

C:\Windows\System32\cmd.exe

```
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java
```

```
C:\Users\KALHARA\Desktop\LabSheet>java Main
John Doe
```

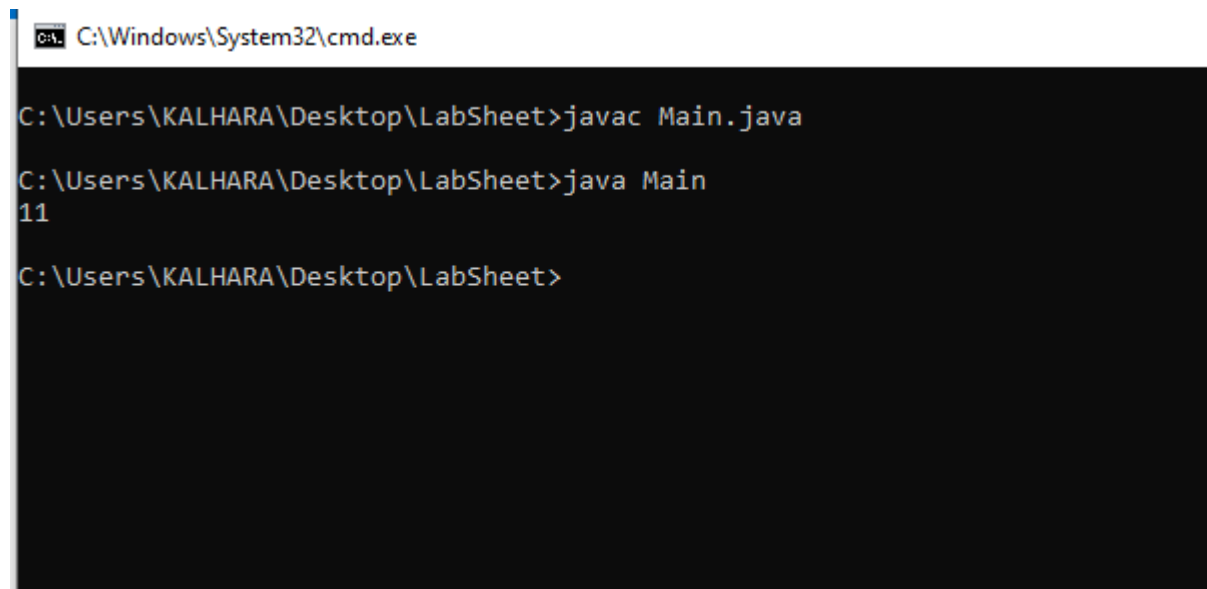
```
C:\Users\KALHARA\Desktop\LabSheet>
```

```

public class Main {
    public static void main(String[] args) {
        int x = 5;
        int y = 6;
        System.out.println(x + y);
    }
}

```

Output:



The screenshot shows a Windows command prompt window titled "C:\Windows\System32\cmd.exe". The user is in the directory "C:\Users\KALHARA\Desktop\LabSheet". They run the command "javac Main.java" to compile the program. Then, they run "java Main" to execute it, which outputs "11". Finally, they run "C:\Users\KALHARA\Desktop\LabSheet>" to show the prompt again.

```

C:\Windows\System32\cmd.exe
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java
C:\Users\KALHARA\Desktop\LabSheet>java Main
11
C:\Users\KALHARA\Desktop\LabSheet>

```

Tasks 09:

Declare Many Variables

```

public class Main {
    public static void main(String[] args) {
        int x = 5, y = 6, z = 50;
        System.out.println(x + y + z);
    }
}

```


Output:

C:\Windows\System32\cmd.exe

```
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java
```

```
C:\Users\KALHARA\Desktop\LabSheet>java Main
```

```
61
```

```
C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 10:

Boolean Types

```
public class Main {  
    public static void main(String[] args) {  
        boolean isJavaFun = true;  
        boolean isFishTasty = false;  
        System.out.println(isJavaFun);  
        System.out.println(isFishTasty);  
    }  
}
```

Output:

C:\Windows\System32\cmd.exe

```
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java
```

```
C:\Users\KALHARA\Desktop\LabSheet>java Main
```

```
true
```

```
false
```

```
C:\Users\KALHARA\Desktop\LabSheet>
```

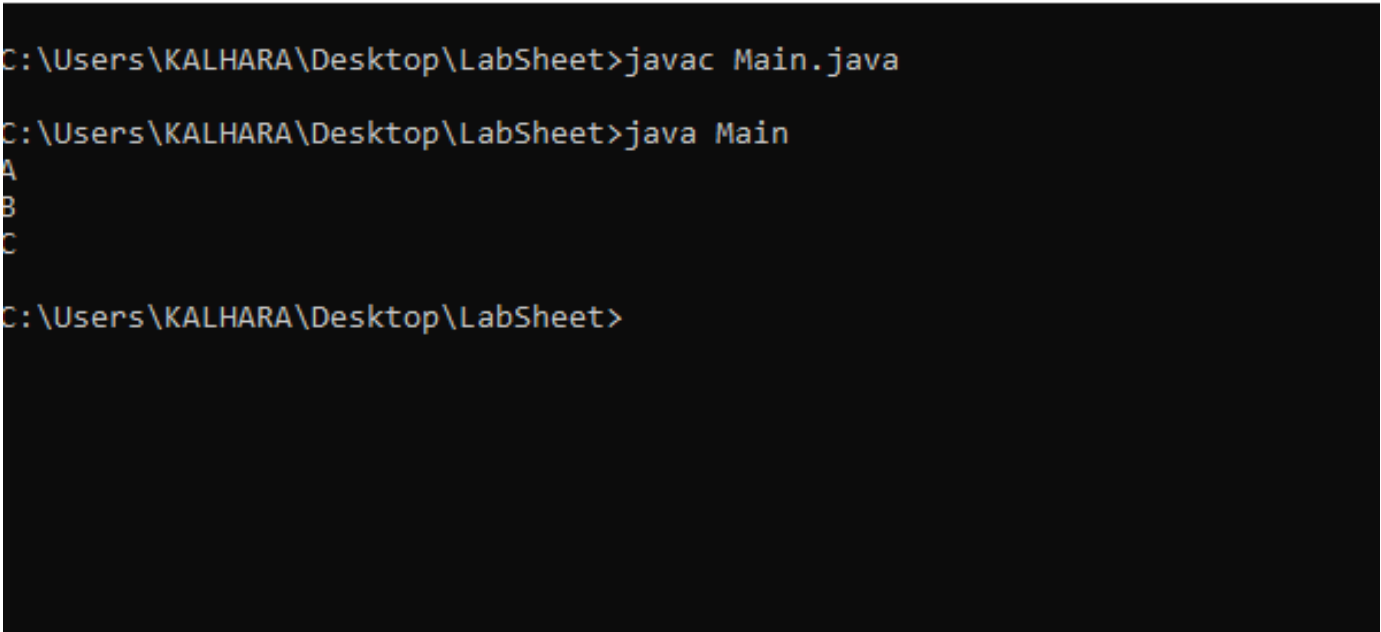
Tasks 11:

Java Characters

```
public class Main {  
    public static void main(String[] args) {  
        char myVar1 = 65, myVar2 = 66, myVar3 = 67;  
        System.out.println(myVar1);  
        System.out.println(myVar2);  
        System.out.println(myVar3);  
    }  
}
```

Output:

C:\Windows\System32\cmd.exe



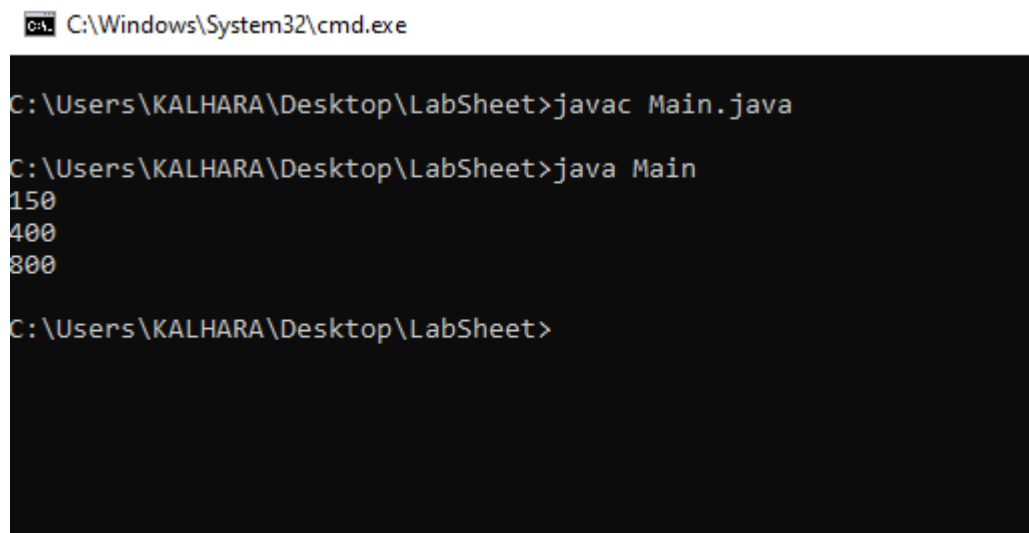
```
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
A  
B  
C  
C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 12:

Java Operators

```
public class Main {  
    public static void main(String[] args) {  
        int sum1 = 100 + 50;  
        int sum2 = sum1 + 250;  
        int sum3 = sum2 + sum2;  
        System.out.println(sum1);  
        System.out.println(sum2);  
        System.out.println(sum3);  
    }  
}
```

Output:



The screenshot shows a Windows command prompt window with the title bar "cmd - C:\Windows\System32\cmd.exe". The command prompt is open at the directory "C:\Users\KALHARA\Desktop\LabSheet". The user enters the command "javac Main.java" and presses Enter. The prompt then shows "C:\Users\KALHARA\Desktop\LabSheet>java Main". The program runs and outputs three lines of text: "150", "400", and "800". The prompt then shows "C:\Users\KALHARA\Desktop\LabSheet>" again.

```
cmd C:\Windows\System32\cmd.exe  
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
150  
400  
800  
C:\Users\KALHARA\Desktop\LabSheet>
```

01.Arithmetic Operators

```
public class Main {  
    public static void main(String[] args) {  
        int x = 5;  
        int y = 3;  
        System.out.println(x * y);  
    }  
}
```

Output:

C:\Windows\System32\cmd.exe

```
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java
C:\Users\KALHARA\Desktop\LabSheet>java Main
15
C:\Users\KALHARA\Desktop\LabSheet>
```

02.Comparison Operators

```
public class Main {
    public static void main(String[] args) {
        int x = 5;
        int y = 3;
        System.out.println(x > y); // returns true, because 5 is higher than 3
    }
}
```

Output:

C:\Windows\System32\cmd.exe

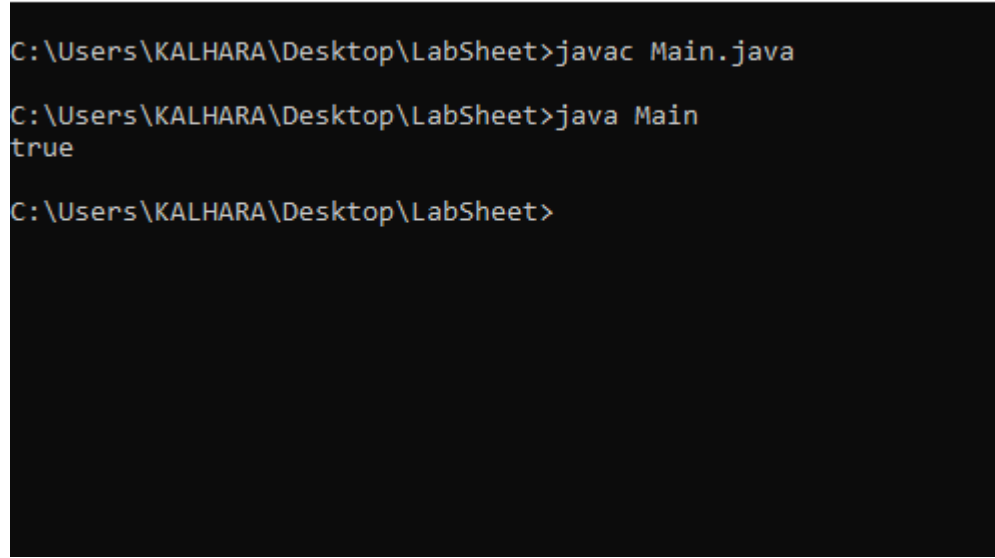
```
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java
C:\Users\KALHARA\Desktop\LabSheet>java Main
true
C:\Users\KALHARA\Desktop\LabSheet>
```

03.Logical Operators

```
public class Main {  
    public static void main(String[] args) {  
        int x = 5;  
        System.out.println(x > 3 && x < 10);  
    }  
}
```

Output:

C:\Windows\System32\cmd.exe



```
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
true  
C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 13:

Java Strings

01.String Length

```
public class Main {  
    public static void main(String[] args) {  
        String txt = "ABCDEFGHIJKLMNOPQRSTUVWXYZ";  
        System.out.println("The length of the txt string is: " + txt.length());  
    }  
}
```

Output:

```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

C:\Users\KALHARA\Desktop\LabSheet>java Main
The length of the txt string is: 26

C:\Users\KALHARA\Desktop\LabSheet>
```

02.String Methods

```
public class Main {

    public static void main(String[] args) {

        String txt = "Hello World";

        System.out.println(txt.toUpperCase());

        System.out.println(txt.toLowerCase());

    }

}
```

Output:

```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

C:\Users\KALHARA\Desktop\LabSheet>java Main
HELLO WORLD
hello world


C:\Users\KALHARA\Desktop\LabSheet>
```

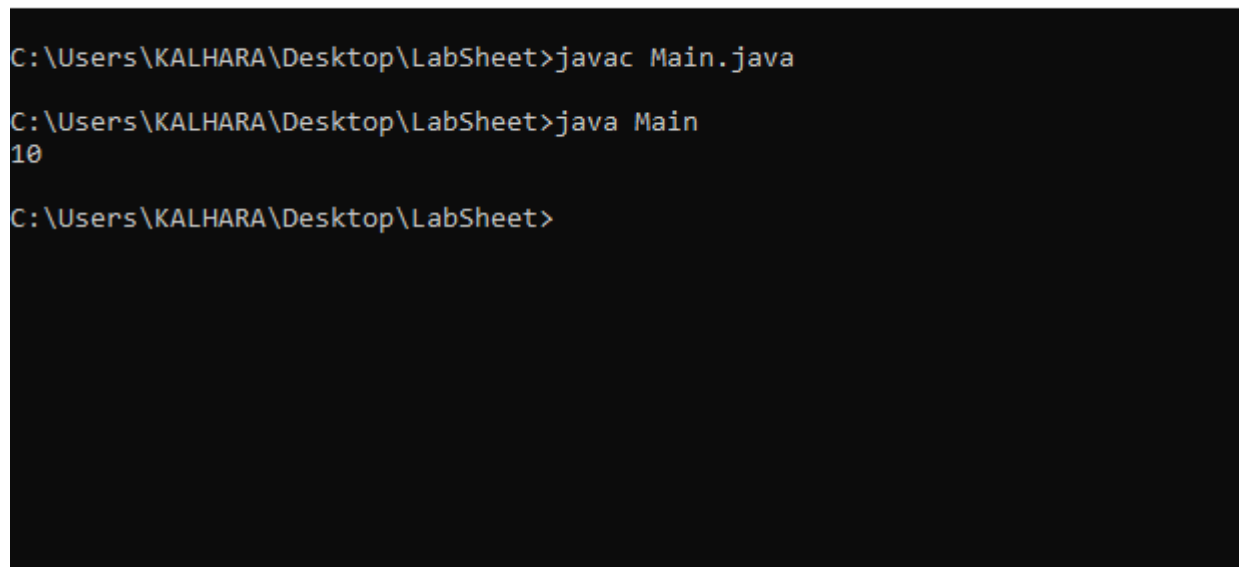
Tasks 14:

Java Math

```
public class Main {  
    public static void main(String[] args) {  
        System.out.println(Math.max(5, 10));  
    }  
}
```

Output:

 C:\Windows\System32\cmd.exe



```
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
10  
C:\Users\KALHARA\Desktop\LabSheet>
```

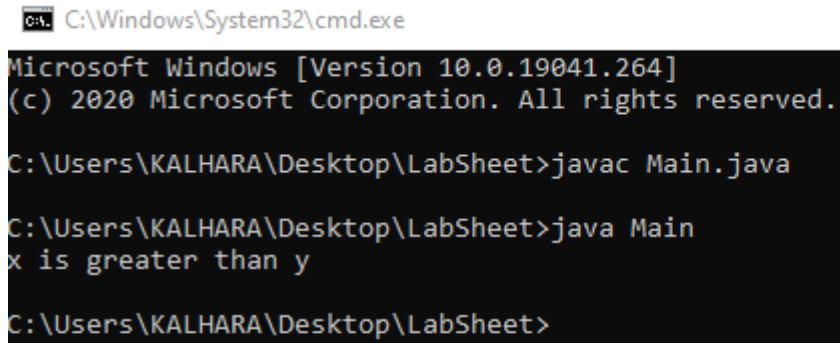
Tasks 15:

Java Conditions and If Statements

01.if Statement

```
public class Main {  
    public static void main(String[] args) {  
        int x = 20;  
        int y = 18;  
        if (x > y) {  
            System.out.println("x is greater than y");  
        }  
    }  
}
```

Output:



```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19041.264]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

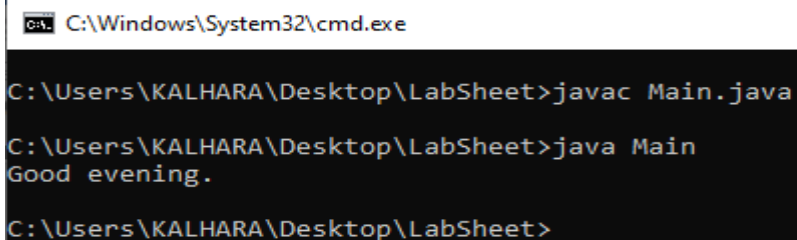
C:\Users\KALHARA\Desktop\LabSheet>java Main
x is greater than y

C:\Users\KALHARA\Desktop\LabSheet>
```

02.else Statement

```
public class Main {
    public static void main(String[] args) {
        int time = 20;
        if (time < 18) {
            System.out.println("Good day.");
        }
        else {
            System.out.println("Good evening.");
        }
    }
}
```

Output:



```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java


C:\Users\KALHARA\Desktop\LabSheet>java Main
Good evening.

C:\Users\KALHARA\Desktop\LabSheet>
```


03.else if Statement

```
public class Main {  
    public static void main(String[] args) {  
        int time = 22;  
        if (time < 10) {  
            System.out.println("Good morning.");  
        }  
        else if (time < 18) {  
            System.out.println("Good day.");  
        }  
        else{  
            System.out.println("Good evening.");  
        }  
    }  
}
```

Output:


 C:\Windows\System32\cmd.exe

```
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
Good evening.  
C:\Users\KALHARA\Desktop\LabSheet>
```

03.If...Else

```
public class Main {  
    public static void main(String[] args) {  
        int time = 20;  
        if (time < 18) {  
            System.out.println("Good day.");  
        }  
        else {  
            System.out.println("Good evening.");  
        }  
    }  
}
```

Output:

 C:\Windows\System32\cmd.exe

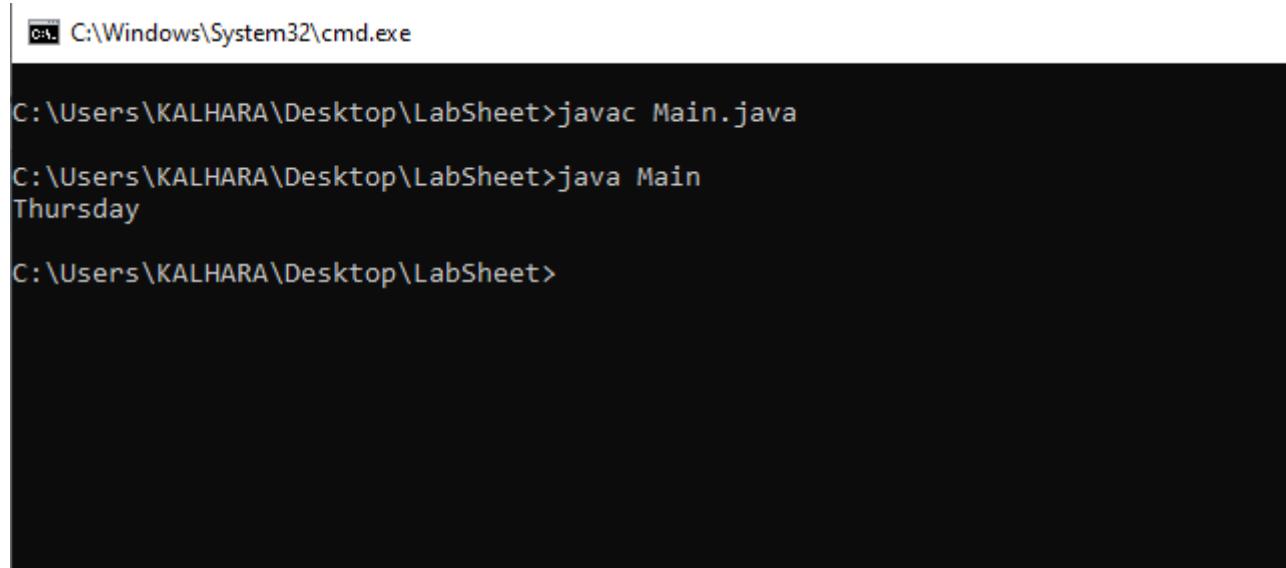
```
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
Good evening.  
C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 16:

Java Switch Statements

```
public class Main {  
    public static void main(String[] args) {  
        int day = 4;  
        switch (day) {  
            case 1:  
                System.out.println("Monday");  
                break;  
            case 2:  
                System.out.println("Tuesday");  
                break;  
            case 3:  
                System.out.println("Wednesday");  
                break;  
            case 4:  
                System.out.println("Thursday");  
                break;  
            case 7:  
                System.out.println("Sunday");  
                break;  
        }  
    }  
}
```

Output :



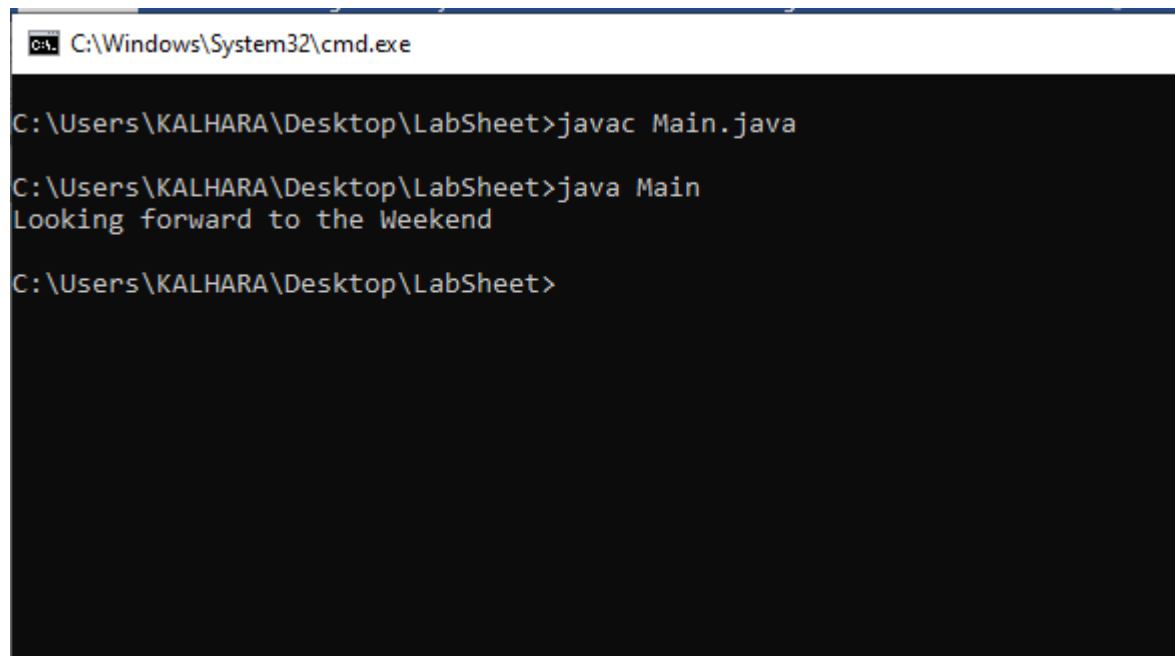
```
C:\Windows\System32\cmd.exe  
  
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
Thursday  
  
C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 17:

default Keyword

```
public class Main {  
    public static void main(String[] args) {  
        int day = 4;  
        switch (day) {  
            case 6:  
                System.out.println("Today is Saturday");  
                break;  
            case 7:  
                System.out.println("Today is Sunday");  
                break;  
            default:  
                System.out.println("Looking forward to the Weekend");  
        }  
    }  
}
```

Output:



The screenshot shows a Windows command prompt window with the title bar "C:\Windows\System32\cmd.exe". The command prompt is open at the directory "C:\Users\KALHARA\Desktop\LabSheet". The user has entered the command "javac Main.java" and then "java Main". The output of the program is "Looking forward to the Weekend".

```
C:\Windows\System32\cmd.exe  
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
Looking forward to the Weekend  
C:\Users\KALHARA\Desktop\LabSheet>
```

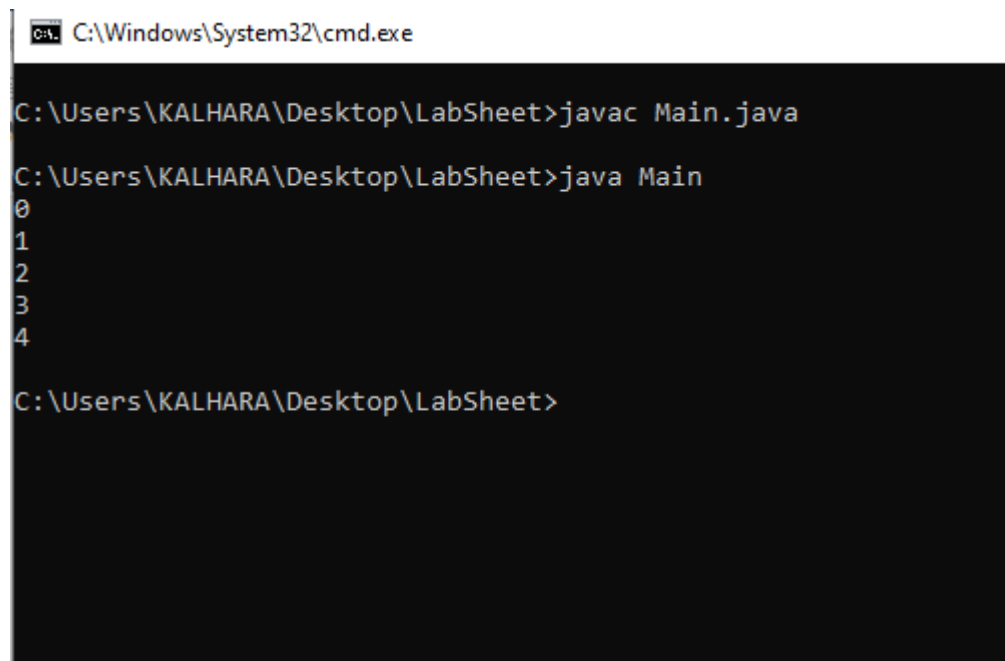
Tasks 18:

Java Loops

01. Java While Loop

```
public class Main {  
    public static void main(String[] args) {  
        int i = 0;  
        while (i < 5) {  
            System.out.println(i);  
            i++;  
        }  
    }  
}
```

Output:



```
C:\Windows\System32\cmd.exe  
  
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
0  
1  
2  
3  
4  
  
C:\Users\KALHARA\Desktop\LabSheet>
```

02. Java Do/While Loop

```
public class Main {  
    public static void main(String[] args) {  
        int i = 0;  
        do {  
            System.out.println(i);  
            i++;  
        }  
        while (i < 5);  
    }  
}
```

Output:

```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

C:\Users\KALHARA\Desktop\LabSheet>java Main
0
1
2
3
4

C:\Users\KALHARA\Desktop\LabSheet>
```

03.Java For Loop

```
public class Main {
    public static void main(String[] args) {
        for (int i = 0; i < 5; i++) {
            System.out.println(i);
        }
    }
}
```

Output:

```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

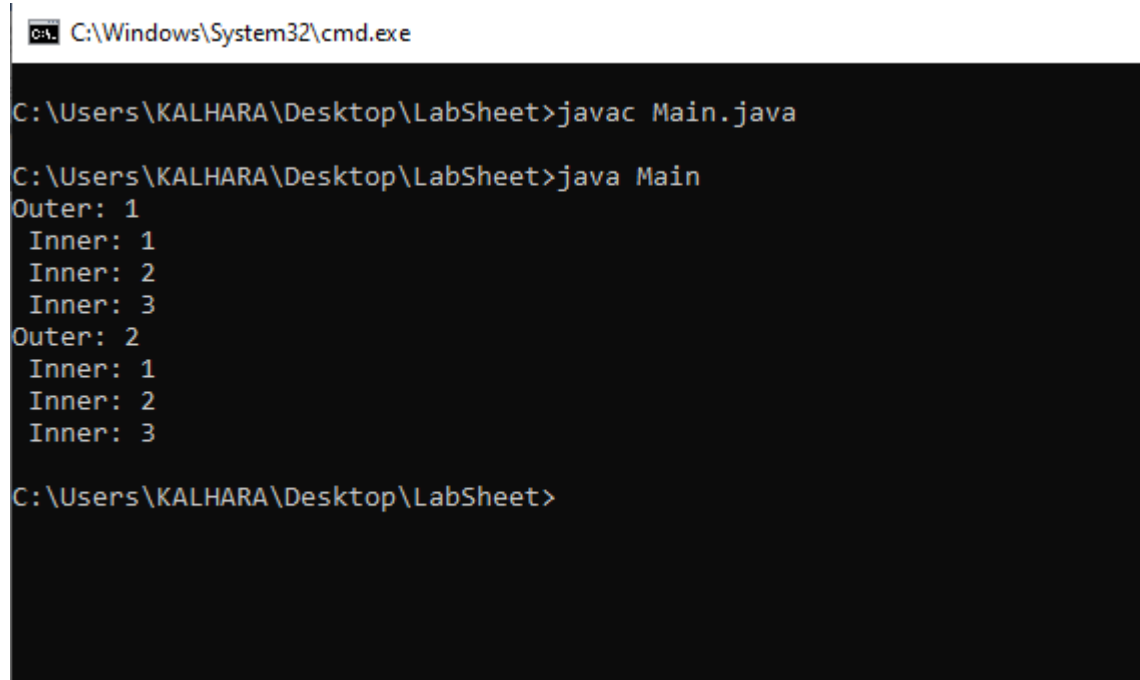
C:\Users\KALHARA\Desktop\LabSheet>java Main
0
1
2
3
4

C:\Users\KALHARA\Desktop\LabSheet>
```

04.Nested Loops

```
public class Main {  
    public static void main(String[] args) {  
        for (int i = 1; i <= 2; i++) {  
            System.out.println("Outer: " + i);  
            for (int j = 1; j <= 3; j++) {  
                System.out.println(" Inner: " + j);  
            }  
        }  
    }  
}
```

Output:



```
C:\Windows\System32\cmd.exe  
  
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
Outer: 1  
  Inner: 1  
  Inner: 2  
  Inner: 3  
Outer: 2  
  Inner: 1  
  Inner: 2  
  Inner: 3  
  
C:\Users\KALHARA\Desktop\LabSheet>
```

05.For-Each Loop

```
public class Main {  
    public static void main(String[] args) {  
        String[] cars = {"Volvo", "BMW", "Ford", "Mazda"};  
        for (String i : cars) {  
            System.out.println(i);  
        }  
    }  
}
```

Output:

C:\Windows\System32\cmd.exe

```
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

C:\Users\KALHARA\Desktop\LabSheet>java Main
Volvo
BMW
Ford
Mazda

C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 19:

Java Break and Continue

01.Java Break

```
public class Main {
    public static void main(String[] args) {
        for (int i = 0; i < 10; i++) {
            if (i == 4) {
                break;
            }
            System.out.println(i);
        }
    }
}
```

Output:

C:\Windows\System32\cmd.exe

```
Microsoft Windows [Version 10.0.19041.264]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

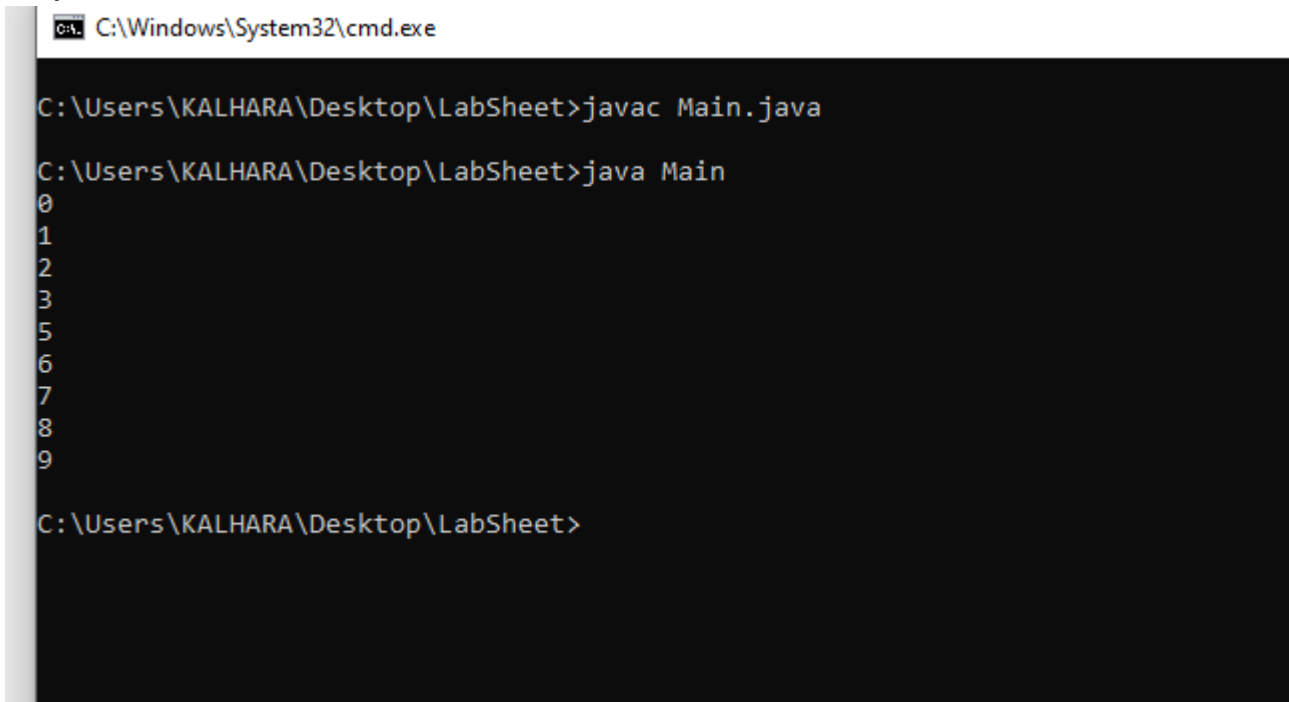
C:\Users\KALHARA\Desktop\LabSheet>java Main
Volvo
BMW
Ford
Mazda

C:\Users\KALHARA\Desktop\LabSheet>
```


0.Java Continue

```
public class Main {  
    public static void main(String[] args) {  
        for (int i = 0; i < 10; i++) {  
            if (i == 4) {  
                continue;  
            }  
            System.out.println(i);  
        }  
    }  
}
```

Output:



```
C:\Windows\System32\cmd.exe  
  
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
0  
1  
2  
3  
5  
6  
7  
8  
9  
  
C:\Users\KALHARA\Desktop\LabSheet>
```

Tasks 20:

Java Arrays

```
public class Main {  
    public static void main(String[] args) {  
        String[] cars = {"Volvo", "BMW", "Ford", "Mazda"};  
        System.out.println(cars[0]);  
    }  
}
```

Output:

```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

C:\Users\KALHARA\Desktop\LabSheet>java Main
Volvo

C:\Users\KALHARA\Desktop\LabSheet>
```

01.Change an Array Element

```
public class Main {
    public static void main(String[] args) {
        String[] cars = {"Volvo", "BMW", "Ford", "Mazda"};
        cars[0] = "Opel";
        System.out.println(cars[0]);
    }
}
```

Output:

```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

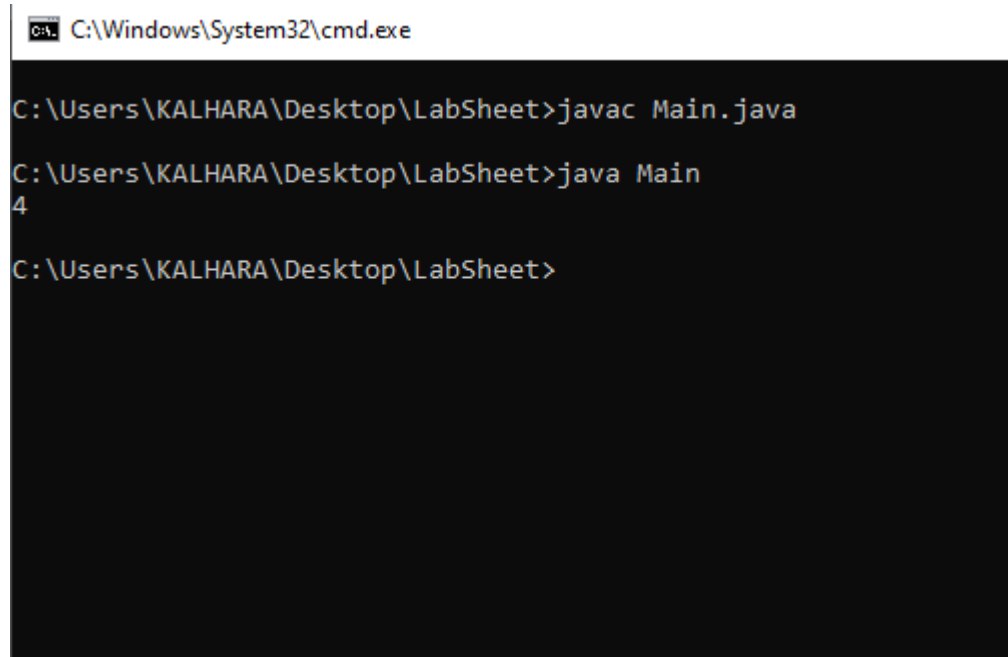
C:\Users\KALHARA\Desktop\LabSheet>java Main
Opel

C:\Users\KALHARA\Desktop\LabSheet>
```

02.Array Length

```
public class Main {  
    public static void main(String[] args) {  
        String[] cars = {"Volvo", "BMW", "Ford", "Mazda"};  
        System.out.println(cars.length);  
    }  
}
```

Output:



The screenshot shows a Windows command prompt window with the title bar "C:\Windows\System32\cmd.exe". The command prompt is open at the directory "C:\Users\KALHARA\Desktop\LabSheet". The user has entered the command "javac Main.java" and the prompt has moved to the next line. Then, the user has entered "java Main" and the prompt has moved to the next line. Finally, the user has entered "4" and the prompt has moved to the next line. The output of the program is "4", which is displayed on the line following the last command.

```
C:\Windows\System32\cmd.exe  
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
4  
C:\Users\KALHARA\Desktop\LabSheet>
```

03.Loop Through an Array

```
public class Main {  
    public static void main(String[] args) {  
        String[] cars = {"Volvo", "BMW", "Ford", "Mazda"};  
        for (int i = 0; i < cars.length; i++) {  
            System.out.println(cars[i]);  
        }  
    }  
}
```

Output:

```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

C:\Users\KALHARA\Desktop\LabSheet>java Main
Volvo
BMW
Ford
Mazda

C:\Users\KALHARA\Desktop\LabSheet>
```

04.Multidimensional Arrays

```
public class Main {

    public static void main(String[] args) {

        int[][] myNumbers = { {1, 2, 3, 4}, {5, 6, 7} };

        System.out.println(myNumbers[1][2]);

    }

}
```

Output:

```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Main.java

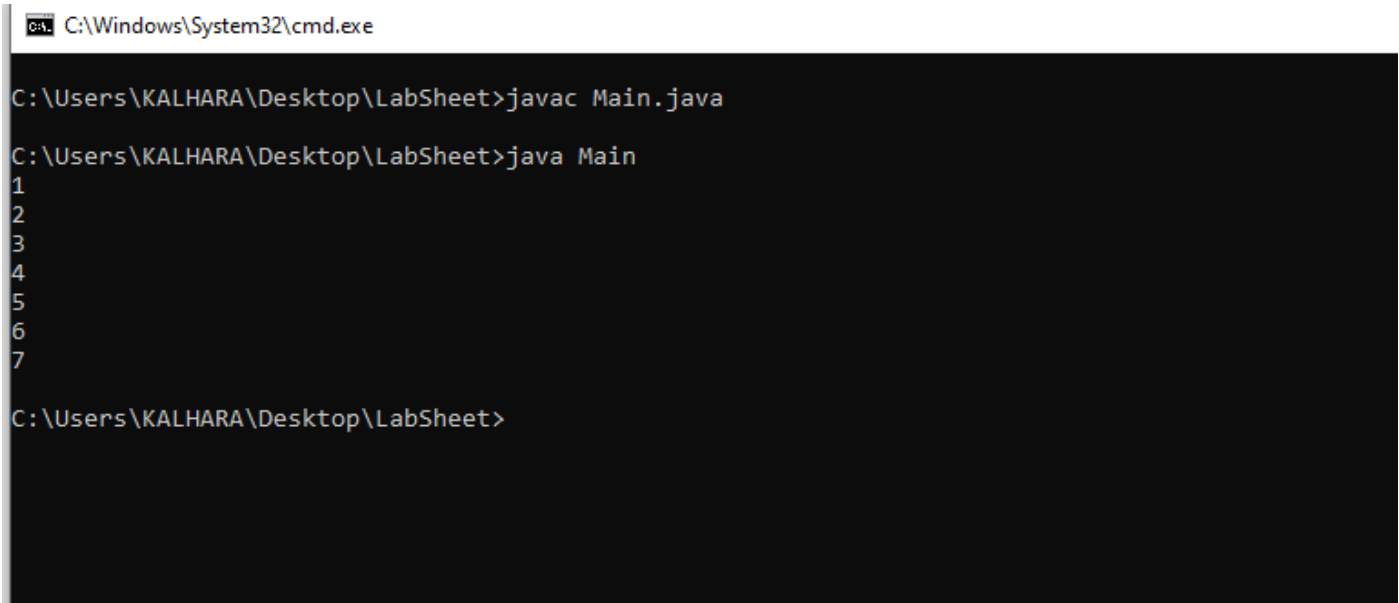
C:\Users\KALHARA\Desktop\LabSheet>java Main
7

C:\Users\KALHARA\Desktop\LabSheet>
```

05. Loop Through a Multi-Dimensional Array

```
public class Main {  
    public static void main(String[] args) {  
        int[][] myNumbers = { {1, 2, 3, 4}, {5, 6, 7} };  
        for (int i = 0; i < myNumbers.length; ++i) {  
            for(int j = 0; j < myNumbers[i].length; ++j) {  
                System.out.println(myNumbers[i][j]);  
            }  
        }  
    }  
}
```

Output:



```
C:\Windows\System32\cmd.exe  
  
C:\Users\KALHARA\Desktop\LabSheet>javac Main.java  
  
C:\Users\KALHARA\Desktop\LabSheet>java Main  
1  
2  
3  
4  
5  
6  
7  
  
C:\Users\KALHARA\Desktop\LabSheet>
```

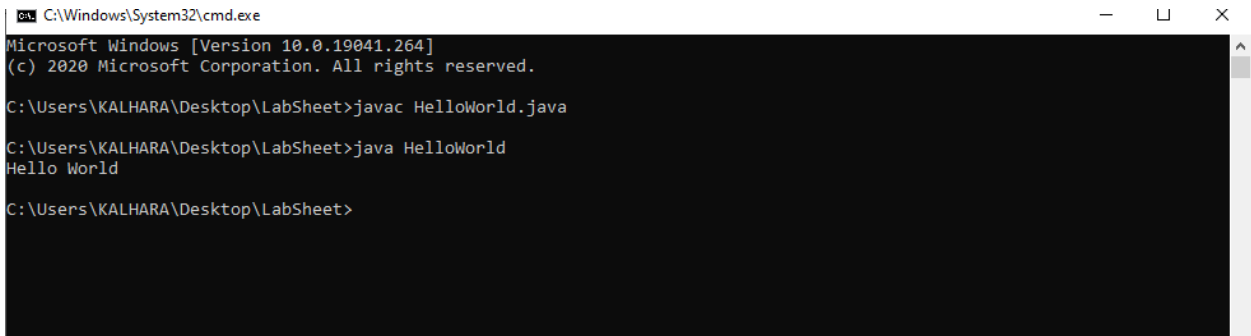
Exercise 01:

1) Create your first java program that will print, “Hello, Welcome to Object Oriented Programming!”.

- Make the name of the class as ‘**HelloWorld**’.
- Write the main method that will execute the print statement given.
- Save the program by giving the file name same as class name and with the .java extension.
- Compile the program you created.
- Execute the program you created.

```
public class HelloWorld{  
    public static void main (String[] args){  
        System.out.println("Hello World");  
    }  
}
```

Output:



```
C:\Windows\System32\cmd.exe  
Microsoft Windows [Version 10.0.19041.264]  
(c) 2020 Microsoft Corporation. All rights reserved.  
  
C:\Users\KALHARA\Desktop\LabSheet>javac HelloWorld.java  
  
C:\Users\KALHARA\Desktop\LabSheet>java HelloWorld  
Hello World  
  
C:\Users\KALHARA\Desktop\LabSheet>
```

2. Create a class to display the following.

Name : Sam
Subject: OOP
Duration : 4 Months
Grade : A+

```
public class Exercise1{  
    public static void main(String[] args){  
  
        String Name="Sam";  
        String Subject ="OOP";  
        String Duration ="4 Months";  
        String Grade="A+";  
  
        System.out.println(" Name :"+ Name);  
        System.out.println(" Subject:"+ Subject);  
        System.out.println(" Duration:"+Duration);  
        System.out.println(" Grade :"+ Grade);  
  
    }  
}
```

Output:

```
cmd C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Exercise1.java

C:\Users\KALHARA\Desktop\LabSheet>java Exercise1
Name :Sam
Subject:OOP
Duration:4 Months
Grade :A+

C:\Users\KALHARA\Desktop\LabSheet>
```

Exercise 02:

1. Create a class called **Student**. Within this class,
 - a. Define two variables namely **id** and **name**.
 - b. Initialize **id** to **1** and **name** to **Kamal**.
 - c. **Display everything inside the Method.**

```
public class Students{
    public static void main (String[] args){
        int id=1;
        String Name ="Kamal";
        System.out.println("Id :"+id);
        System.out.println("Name:"+Name);
    }
}
```

```
cmd C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Students.java

C:\Users\KALHARA\Desktop\LabSheet>java Students
Id :1
Name:Kamal

C:\Users\KALHARA\Desktop\LabSheet>
```

Exercise 03:

1. Create a class called **Employee**. Within the class,
 - a. Create the variables **empid**, **name** and **salary** (salary is a float value).
 - b. Assign the Value for those variable and display all.
 - c. Change the Value after display those value with the same method.

```
import java.util.Scanner;
```

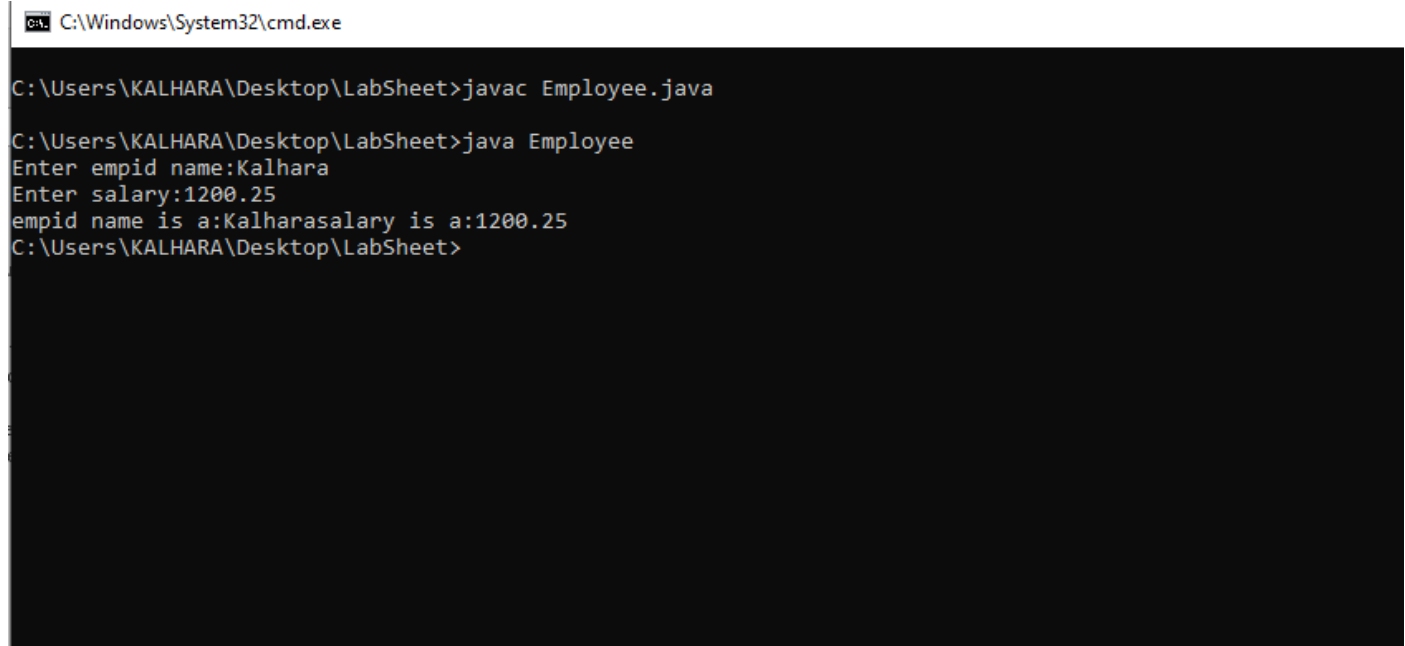
```
public class Employee{
    public static void main(String []args){
        String empid_name;
        float salary;
        Scanner scanner = new Scanner(System.in);

        System.out.print("Enter empid name:");
        empid_name =scanner.nextLine();

        System.out.print("Enter salary:");
        salary=scanner.nextFloat();

        System.out.print("empid name is a:"+empid_name);
        System.out.print("salary is a:"+salary);
    }
}
```

Output:



```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Employee.java

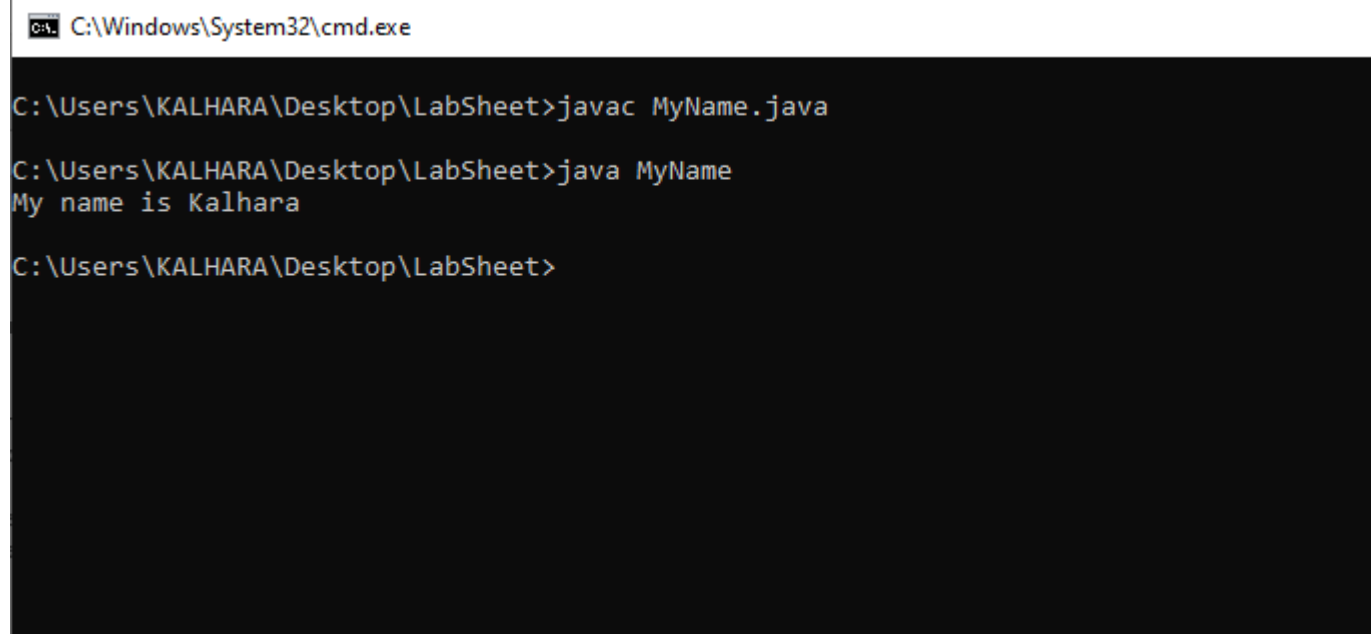
C:\Users\KALHARA\Desktop\LabSheet>java Employee
Enter empid name:Kalhara
Enter salary:1200.25
empid name is a:Kalharasalary is a:1200.25
C:\Users\KALHARA\Desktop\LabSheet>
```


Exercise 04:

1. Create a class called MyName to print your name.

```
public class MyName{  
    public static void main(String []args){  
        System.out.println("My name is Kalhara");  
    }  
}
```

Output:



```
C:\Windows\System32\cmd.exe  
  
C:\Users\KALHARA\Desktop\LabSheet>javac MyName.java  
  
C:\Users\KALHARA\Desktop\LabSheet>java MyName  
My name is Kalhara  
  
C:\Users\KALHARA\Desktop\LabSheet>
```

2. Create a class to display the following

Java is an example for OOP
It is a pure Object Oriented language

```
public class MyClass{  
    public static void main(String[] args){  
        System.out.println("Java is an example for OOP ");  
        System.out.println("It is a pure Object Oriented language");  
    }  
}
```

Output:

```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac MyClass.java

C:\Users\KALHARA\Desktop\LabSheet>java MyClass
Java is an example for OOP
It is a pure Object Oriented language

C:\Users\KALHARA\Desktop\LabSheet>
```

3.

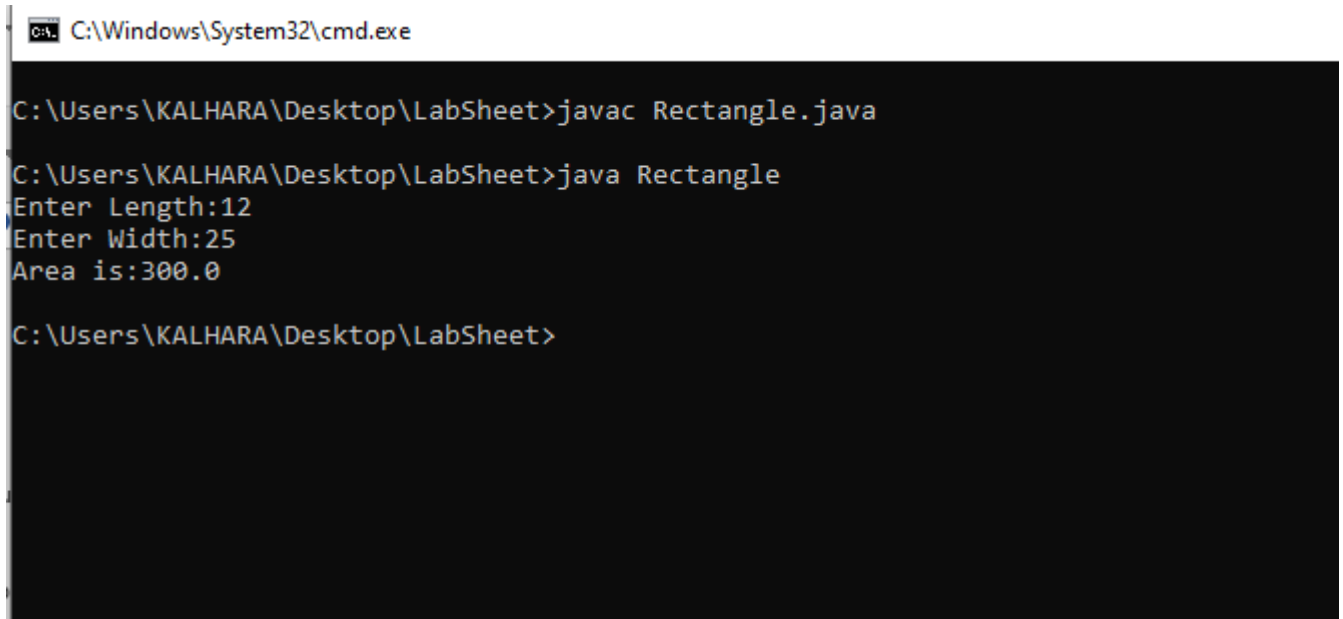
- Create a class called **Rectangle**. Within the class,
 - I. Create the variables **length** and **width**.
 - II. Assign the Value for those variable (float data type).
 - III. Next, creae another method **calculateArea()** to calculate the area of the given rectangle.

```
import java.util.Scanner;
public class Rectangle{
    public static void main (String []args){

        Scanner sc =new Scanner(System.in);

        float length;
        float width;
        System.out.print("Enter Length:");
        length = sc.nextFloat();
        System.out.print("Enter Width:");
        width = sc.nextFloat();
        float Area;
        Area =length*width;
        System.out.println("Area is:"+Area);
    }
}
```

Output:



```
C:\Windows\System32\cmd.exe

C:\Users\KALHARA\Desktop\LabSheet>javac Rectangle.java

C:\Users\KALHARA\Desktop\LabSheet>java Rectangle
Enter Length:12
Enter Width:25
Area is:300.0

C:\Users\KALHARA\Desktop\LabSheet>
```

Discussion :

- User Input
- Output
- Comments
- Operators
- Conditional Statement
- Loops
- Array