INSTITUTE OF ENGINEERING & MANAGEMENT

Department of Computer Science & Engineering

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Class Roll : **27**

Enrollment No. : **12019002002039**

Subject Name : **OOP Lab**

Assignment No. : **Day 2**

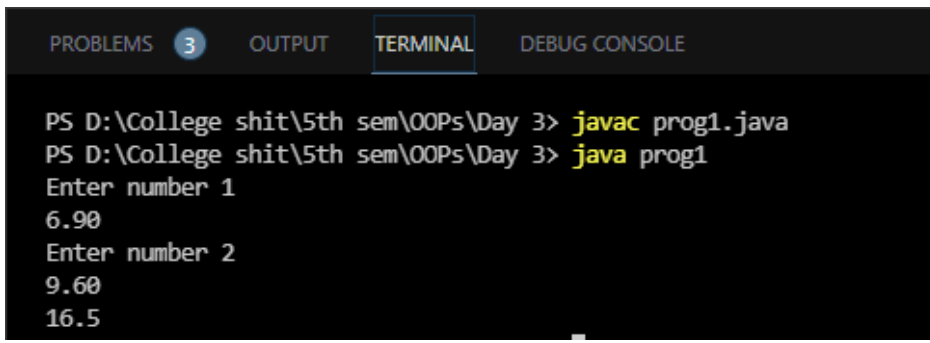
Date : **11/08/2021**

1. Add two floating-point numbers by taking input using java.io.Console class.

Ans:

```
import java.io.Console;

class prog1 {
    public static void main(String[] args) {
        Console c = System.console();
        System.out.println("Enter number 1");
        float f1 = Float.parseFloat(c.readLine());
        System.out.println("Enter number 2");
        float f2 = Float.parseFloat(c.readLine());
        System.out.println(f1 + f2);
    }
}
```

Output:



2. Develop a program to swap two numbers using Pass by value method.

Ans:

```
import java.util.*;
public class prog2
{
    public static void swap(int a,int b)
    {
        int t=0;
        t=a;
        a=b;
```

```
        b=t;
        System.out.println("The value in 1st variable is "+a
);
        System.out.println("The value in 2nd variable is "+b
);
    }
    public static void main(String[] args)
    {
        int x,y;
       Scanner sc = new Scanner(System.in);
       System.out.println("Enter the value of X and Y");
       x = sc.nextInt();
       y = sc.nextInt();
       swap(x,y);
    }
}
```

Output:

```
PS D:\College shit\5th sem\OOPs\Day 3> javac prog2.java
PS D:\College shit\5th sem\OOPs\Day 3> java prog2
Enter the value of X and Y
5
6
The value in 1st variable is 6
The value in 2nd variable is 5
```

3. Develop a program to swap two numbers using Pass by reference method.

Ans:

```
import java.util.*;
public class prog3
{
    //Scanner sc = new Scanner(System.in);
    //int a = sc.nextInt();
    //int b = sc.nextInt();
    public int a,b;
    public static void swapByRef(prog3 ob)
    {
```

```
        int t = ob.a;
        ob.a = ob.b;
        ob.b = t;
    }

    public static void main(String[] args)
    {
        prog3 p = new prog3();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the numbers");
        p.a = sc.nextInt();
        p.b = sc.nextInt();
        System.out.println("Before call: a = " + p.a + " and
 b = " + p.b);
        swapByRef(p);
        System.out.println("After call: a = " + p.a + " and
b = " + p.b);
    }
}
```

Output:

```
PS D:\College shit\5th sem\OOPs\Day 3> javac prog3.java
PS D:\College shit\5th sem\OOPs\Day 3> java prog3
Enter the numbers
6

9
Before call: a = 6 and b = 9
After call: a = 9 and b = 6
```

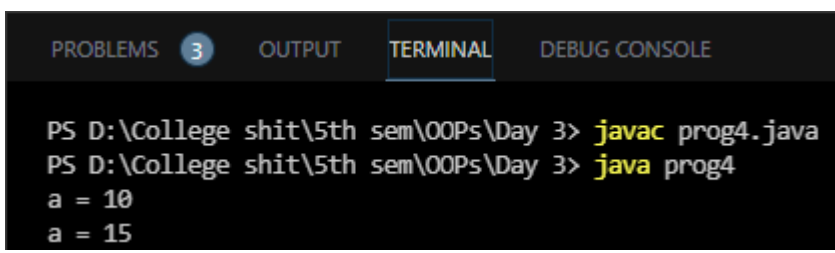
4. Develop a program in Java to show how a method returns an object.

Ans:

```
class Test {
    int a;

    // constructor
    Test(int v) {
```

```
        a = v;
    }

    // method returns an object
    Test method(Test o) {
        return new Test(o.a + 5);
    }
}

public class prog4 {
    public static void main(String[] args) {
        Test t1 = new Test(10);
        System.out.println("a = " + t1.a);
        Test t2 = t1.method(t1);
        System.out.println("a = " + t2.a);
    }
}
```

Output:



5. Write a Java program to make a Student class with proper attributes like roll, name, stream,

college, and grade. From main() create such two students and show their information.

```
import java.util.*;

class Student {
    String name, stream, grade;
    int roll;

    Student() {
        roll = 0;
```

```
        name = "";
        stream = "";
        grade = "";
    }

    public void display(String name, int roll, String stream
, String grade) {
        System.out.println("Name of the student is " + name)
;
        System.out.println("Roll number of the student is "
+ roll);
        System.out.println("Stream of the student is " + str
eam);
        System.out.println("Grade of the student is " + grad
e);
    }
}

class prog5 {
    public static void main(String[] args) {
        Student obj1 = new Student();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the name of the first stud
ent");
        String n1 = sc.nextLine();
        System.out.println("Enter the roll of the student");
        int r1 = Integer.parseInt(sc.nextLine());
        System.out.println("Enter the stream of the student"
);
        String str1 = sc.nextLine();
        System.out.println("Enter the grade of the student")
;
        String g1 = sc.nextLine();
        obj1.display(n1, r1, str1, g1);
        System.out.println("\n Enter the name of the second
student");
        String n2 = sc.nextLine();
        System.out.println("Enter the roll of the student");
        int r2 = Integer.parseInt(sc.nextLine());
```

```
        System.out.println("Enter the stream of the student"
);
        String str2 = sc.nextLine();
        System.out.println("Enter the grade of the student")
;
        String g2 = sc.nextLine();
        obj1.display(n2, r2, str2, g2);
    }
}
```

Output:

```
PS D:\College shit\5th sem\OOPs\Day 3> javac prog5.java
PS D:\College shit\5th sem\OOPs\Day 3> java prog5
Enter the name of the first student
Sappy
Enter the roll of the student
69
Enter the stream of the student
ME
Enter the grade of the student
O
Name of the student is Sappy
Roll number of the student is 69
Stream of the student is ME
Grade of the student is O

 Enter the name of the second student
Bihar
Enter the roll of the student
1
Enter the stream of the student
ME
Enter the grade of the student
F-
Name of the student is Bihar
Roll number of the student is 1
Stream of the student is ME
Grade of the student is F-
```