Lab 2

Assignment 1:

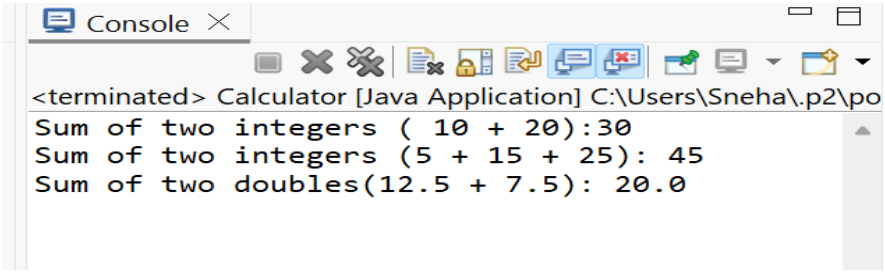
- Write a Java program that demonstrates method overloading by creating a class called Calculator.
- Add three methods called add().
- The first add() method should take two int variables as arguments and return their sum as int.
- The second add() method should take three int variables as arguments and return their sum as int.
- The third add() method should take two doubles as arguments and return their sum as double.
- The program should allow the user to display the results of each method.

Source Code:

```
package labque;

// calculator.java
public class Calculator {

	// Method to add two integers
	public int add(int a, int b) {
		return a + b;
	}

	// Method to add three integers (method overloading)
	public int add(int a, int b, int c) {
		return a + b + c;
	}

	// Method to add two double values (method overloading)
	public double add(double a, double b)
	{
		return a + b;
	}

	public static void main(String[] args) {
		// TODO Auto-generated method stub

		// create an object of calculator class
```

```
        Calculator calc = new Calculator();

        // call method to add two integers
        System.out.println("Sum of two integers ( 10 + 20):" + calc.add(10,20));
        // call method to add three integers
        System.out.println("Sum of two integers (5 + 15 + 25): "+calc.add(5,  15, 25));
        // call method to add two doubles
        System.out.println("Sum of two doubles(12.5 + 7.5): " + calc.add(12.5,7.5));
    }

}
```

Output:



Assignment 2:

- Create a java Bean Class Student.
- Add three attributes
    - Private String name;
    - private int age;
    - private string department;
- Add a constructor that takes all three attributes as parameters.
- Add setter and getter methods.
- Compile the program.

Source Code:

```
package labque;

//Student.java
public class Students {
 // Private attributes
 private String name;
 private int age;
 private String department;

 // Constructor
```

```
public Students(String name, int age, String department) {
    this.name = name;
    this.age = age;
    this.department = department;
}

// Getter and Setter for name
public String getName() {
    return name;
}
public void setName(String name) {
    this.name = name;
}

// Getter and Setter for age
public int getAge() {
    return age;
}
public void setAge(int age) {
    this.age = age;
}

// Getter and Setter for department
public String getDepartment() {
    return department;
}
public void setDepartment(String department) {
    this.department = department;
}


//Main class to test

public static void main(String[] args) {
    // Creating Student object using constructor
    Students s1 = new Students("Sneha", 21, "Computer Science");

    // Display student details
    System.out.println("Name: " + s1.getName());
    System.out.println("Age: " + s1.getAge());
    System.out.println("Department: " + s1.getDepartment());
```

```
    // Update values using setter methods
    s1.setName("Anita");
    s1.setAge(22);
    s1.setDepartment("Information Technology");

    // Display updated details
    System.out.println("\nUpdated Student Details:");
    System.out.println("Name: " + s1.getName());
    System.out.println("Age: " + s1.getAge());
    System.out.println("Department: " + s1.getDepartment());
 }
}
```

Output: