

Batch: 40th

Department of Computer Science & Engineering

Lab Report-01

Object Oriented Programming Lab

Course Code: CSE 124

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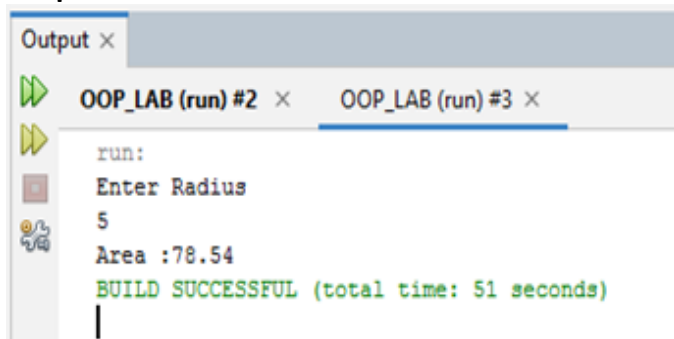
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1. Write a Java program to calculate the area of a Circle. (You have to take input the circle radius from user)

Source Code:

```
package oop_lab_report_1;
import java.util.Scanner;
public class Area_of_Circle {
    public static void main(String[] args) {
        double pi = 3.1416;
        double area;
        int r;
        Scanner s = new Scanner(System.in);
        System.out.println("Enter Radius");
        r = s.nextInt();
        area = pi*r*r;
        System.out.println("Area :"+area);
    }
}
```

Output:



Discussion:

The code imports the Scanner class from the java.util package, declares a public class called "Area_of_Circle", and defines its main method. It assigns a mathematical constant, pi, to 3.1416, and declares three variables: area, r, and s. The user inputs the radius, and the Scanner object "s" reads the user's input. The area is calculated using the formula, and the calculated area is printed using System.out.println().

2. Write a Java program to create a class called "Person" with a name and age attribute. Create two instances of the "Person" class, set their attributes using the constructor, and print their name and age.

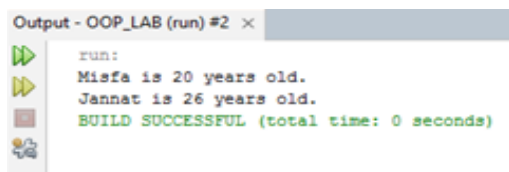
Source Code:

```
package oop_lab_report_1;

public class Person {
    private String name;
    private int age;
    public Person(String name, int age) {
        this.name = name;
        this.age = age;
    }
    public String Name() {
        return name;
    }
    public int Age() {
        return age;
    }
}

//main method
public class Main {
    public static void main(String[] args) {
        Person person1 = new Person("Misfa", 20);
        Person person2 = new Person("Jannat", 26);
        System.out.println(person1.Name() + " is " + person1.Age() + " years old.");
        System.out.println(person2.Name() + " is " + person2.Age() + " years old.");
    }
}
```

Output:



```
Output - OOP_LAB (run) #2 x
run:
Misfa is 20 years old.
Jannat is 26 years old.
BUILD SUCCESSFUL (total time: 0 seconds)
```

Discussion:

This is a simple implementation of a Person class in object-oriented programming (OOP) using Java. The Person class has two private instance variables, "name" and "age", along with a constructor and two getter methods to access these variables. The `Name()` method returns the value of the `name` instance variable, while the `Age()` method returns the value of the `age` instance variable.

The main class has a `main` method that creates two instances of the Person class, `person1` and `person2`, using the constructor. It then uses the `System.out.println()` method to print out the name and age of each person using the `Name()` and `Age()` methods.