**Practical Assignment**

1. Create a class that keeps track of the number of instances created. Implement a static variable and method to accomplish this.

// Java program Find Out the Number of Objects Created

// of a Class

class Test {

static int noOfObjects = 0;

// Instead of performing increment in the constructor

// instance block is preferred to make this program generic.

{

noOfObjects += 1;

}

// various types of constructors

// that can create objects

public Test()

{

}

public Test(int n)

{

}

public Test(String s)

{

}

public static void main(String args[])

{

Test t1 = new Test();

Test t2 = new Test(5);

Test t3 = new Test("GFG");

// We can also write t1.noOfObjects or

// t2.noOfObjects or t3.noOfObjects

System.out.println(Test.noOfObjects);

}

}

2. Write a program and create a constructor with parameters and initialise the variable using a constructor

public class Person {

private String name;

private int age;

public Person(String name, int age) {

this.name = name;

this.age = age;

}

public void display() {

System.out.println("Name: " + name + ", Age: " + age);

}

public static void main(String[] args) {

// Creating an instance of the Person class

Person person1 = new Person("Alice", 30);

// Displaying the details of the person

person1.display();

}

}

3.Use a private keyword for a variable and use setter and getter methods to initialise and

print the values.

public class Person {

private String name;

public void setName(String name) {

this.name = name;

}

public String getName() {

return this.name;

}

public static void main(String[] args) {

Person person = new Person();

person.setName("Alice");

System.out.println("Name: " + person.getName());

}

}

4.Write a program to call a method without creating an object of a class.

public class MyClass {

public static void myMethod() {

System.out.println("Hello, world!");

}

public static void main(String[] args) {

// Calling the static method without creating an object

MyClass.myMethod();

}

}

5.Write a program which has static block and constructor overloading,initialise variables

using constructors and print it.

public class MyClass {

private int number;

private String name;

static {

System.out.println("Static block: This is executed first, before any constructor or method.");

}

public MyClass() {

this.number = 0;

this.name = "";

}

public MyClass(int number, String name) {

this.number = number;

this.name = name;

}

public void display() {

System.out.println("Number: " + number + ", Name: " + name);

}

public static void main(String[] args) {

MyClass obj1 = new MyClass();

obj1.display();

MyClass obj2 = new MyClass(42, "Alice");

obj2.display();

}

}