**1]** **Static Nested Class and Static Methods:**

**Write a Java program to create an outer class called 'MathUtil' with a static nested class Calculator. The Calculator class should have a static method add(int a, int b) that returns the sum of a and b. Call the add() method from the main method.**

**Code:**

package javaapplication28;

public class MathUtil {

public static class Calculator {

public static int add(int a, int b) {

return a + b;

}

}

public static void main(String[] args) {

System.out.println("The sum is: " + Calculator.add(5, 3));

}

}

**Output:**

The sum is: 8

**2] Inner Class Accessing Outer Class Members:**

**Write a Java program to create an outer class called Library with an instance variable libraryName. Create an inner class Book with a method getLibraryName() that returns the name of the library. Instantiate the Book class and call the getLibraryName() method.**

**Code:**

package javaapplication28;

public class Library{

private String libraryName;

public Library(String libraryName){

this.libraryName=libraryName;

}

public class Book{

public String getLibraryName(){

return Library.this.libraryName;

}

}

public static void main(String[] args){

Library library=new Library("MG Library");

Library.Book book=library.new Book();

System.out.println("The library name is: "+book.getLibraryName());

}

}

**Output:**

The library name is: MG Library