**Q6. Write a Java program to Perimeter of a rectangle, Perimeter of a square, Volume of a cylinder Volume of a sphere and Volume of a cone (By Using switch case).**

import java.util.Scanner;

public class GeometryCalculations {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

System.out.println("Choose an option:");

System.out.println("1. Perimeter of a rectangle");

System.out.println("2. Perimeter of a square");

System.out.println("3. Volume of a cylinder");

System.out.println("4. Volume of a sphere");

System.out.println("5. Volume of a cone");

int choice = scanner.nextInt();

switch (choice) {

case 1:

System.out.print("Enter length: ");

double length = scanner.nextDouble();

System.out.print("Enter breadth: ");

double breadth = scanner.nextDouble();

System.out.println("Perimeter of the rectangle: " + 2 \* (length + breadth));

break;

case 2:

System.out.print("Enter side: ");

double side = scanner.nextDouble();

System.out.println("Perimeter of the square: " + 4 \* side);

break;

case 3:

System.out.print("Enter radius: ");

double radius = scanner.nextDouble();

System.out.print("Enter height: ");

double height = scanner.nextDouble();

System.out.println("Volume of the cylinder: " + (Math.PI \* radius \* radius \* height));

break;

case 4:

System.out.print("Enter radius: ");

radius = scanner.nextDouble();

System.out.println("Volume of the sphere: " + (4.0 / 3.0 \* Math.PI \* Math.pow(radius, 3)));

break;

case 5:

System.out.print("Enter radius: ");

radius = scanner.nextDouble();

System.out.print("Enter height: ");

height = scanner.nextDouble();

System.out.println("Volume of the cone: " + (1.0 / 3.0 \* Math.PI \* Math.pow(radius, 2) \* height));

break;

default:

System.out.println("Invalid choice!");

}

scanner.close();

}

}