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Question: Write a program to find surface area and volume of Cylinder. Using Constructors-Keyboard Input or Command Line Input.

Code:

```java
import java.util.Scanner;
class Cylinder {
    private double radius, height;

    Cylinder(double radius, double height) {
        this.radius = radius;
        this.height = height;
    }
    double getVolume() {
        return (2 * Math.PI * Math.pow(this.radius, 2) * this.height);
    }
    double getSurfaceArea() {
        return (2 * Math.PI * this.radius * (this.radius + this.height));
    }
}
public class CylinderArea {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter radius and height:");
        double radius = sc.nextDouble(), height = sc.nextDouble();
        Cylinder cylinder = new Cylinder(radius, height);
        System.out.println("Volume: " + String.format("%.2f",
cylinder.getVolume()));
        System.out.println("Surface Area: " + String.format("%.2f",
cylinder.getSurfaceArea()));
        sc.close();
    }
}
```

Output:

```
PS D:\OOPS-PCC-CS593\Day 5 (23.09.2020)> javac CylinderArea.java
PS D:\OOPS-PCC-CS593\Day 5 (23.09.2020)> java CylinderArea
Enter radius and height:
5
6
Volume: 942.48
Surface Area: 345.58
```

Question: Write a program to find surface area and volume of Cone Using Constructors-keyboard input or command line input.

Code:

```java
import java.util.Scanner;
class Cone {
    private double radius, height;
    Cone(double radius, double height) {
        this.radius = radius;
        this.height = height;
    }
    double getVolume() {
        return ((1.0 / 3.0) * Math.PI * Math.pow(this.radius, 2) *
this.height);
    }
    double getSurfaceArea() {
        return (Math.PI * this.radius
                * (this.radius + Math.sqrt((Math.pow(this.height, 2) +
Math.pow(this.radius, 2))))));
    }
}
public class ConeArea {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter radius and height:");
        double radius = sc.nextDouble(), height = sc.nextDouble();
        Cone cone = new Cone(radius, height);
        System.out.println("Volume: " + String.format("%.2f",
cone.getVolume()));
        System.out.println("Surface Area: " + String.format("%.2f",
cone.getSurfaceArea()));
        sc.close();
    }
}
```

Output:

```
PS D:\OOPS-PCC-CS593\Day 5 (23.09.2020)> javac ConeArea.java
PS D:\OOPS-PCC-CS593\Day 5 (23.09.2020)> java ConeArea
Enter radius and height:
10
20
Volume: 2094.40
Surface Area: 1016.64
```

Question: Calculate Rectangle Area

Code:

```java
import java.util.Scanner;

class Rectangle{
    private int length,breadth;

    public void inputData(int l , int b){
        length = l;
        breadth = b;
    }

    public int computeArea(){
        return length * breadth;
    }
}

public class RectangleArea{
    public static void main(String args[]){
        Rectangle rect = new Rectangle();
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the length and breadth:");
        int l= sc.nextInt();
        int b= sc.nextInt();
        rect.inputData(l, b);
        int area = rect.computeArea();
        System.out.println("Area: " + area);
    }
}
```

Output:

```
PS D:\OOPS-PCC-CS593\Day 5 (23.09.2020)> javac RectangleArea.java
PS D:\OOPS-PCC-CS593\Day 5 (23.09.2020)> java RectangleArea
Enter the length and breadth:
10
20
Area: 200
```

Question: Calculate Cube Area
Code:

```java
import java.util.Scanner;
public class CubeArea {
    static double length, breadth, height;
    public static void inputData()
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter the length of the cube");
        length=sc.nextDouble();
        System.out.println("Enter the breadth of the cube");
        breadth=sc.nextDouble();
        System.out.println("Enter the height of the cube");
        height=sc.nextDouble();
    }
    public static double computeVolume(){
        return length*breadth*height;
    }
    public static void main(String[] args){
        inputData();
        double vol=computeVolume();
        System.out.format("Volume of the cube: %.2f", vol);
    }
}
```

Output:

```
PS D:\OOPS-PCC-CS593\Day 5 (23.09.2020)> javac CubeArea.java
PS D:\OOPS-PCC-CS593\Day 5 (23.09.2020)> java CubeArea
Enter the length of the cube
10
Enter the breadth of the cube
10
Enter the height of the cube
10
Volume of the cube: 1000.00
```

Question: Add two numbers by taking input using Command Line Input, Scanner class and BufferedReader class.

Code:

```java
import java.util.Scanner;
import java.io.BufferedReader;
import java.io.IOException;
import java.io.InputStreamReader;

class CommandLineArguments {
    public static void main(String[] args) {
        int a = Integer.parseInt(args[0]);
        int b = Integer.parseInt(args[1]);
        System.out.println("Sum is " + (a + b));
    }
}

class ScannerExample {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the number: ");
        int a = sc.nextInt();
        int b = sc.nextInt();
        System.out.println("Sum is " + (a + b));
        sc.close();
    }
}

class BufferReaderExample {
    public static void main(String[] args) throws IOException {
        BufferedReader buf = new BufferedReader(new
InputStreamReader(System.in));
        int a = Integer.parseInt(buf.readLine());
        int b = Integer.parseInt(buf.readLine());
        System.out.println("Sum is " + (a + b));
    }
}
```

Output:

```
PS D:\OOPS-PCC-CS593\Day 5 (23.09.2020)> javac SumInput.java
PS D:\OOPS-PCC-CS593\Day 5 (23.09.2020)> java CommandLineArguments 10 20
Sum is 30
PS D:\OOPS-PCC-CS593\Day 5 (23.09.2020)> java ScannerExample
Enter the number:
10
20
Sum is 30
PS D:\OOPS-PCC-CS593\Day 5 (23.09.2020)> java BufferReaderExample
10
20
Sum is 30
```