

```
import java.util.*;
import java.lang.*;
class areaVol{

    public static void cylinder(double r, double h){

        double ar = (2*3.14*r*h)+(2*3.14*r*r);
        double vol = (3.14*r*r*h);
        System.out.println("Area of Cylinder is " + ar);
        System.out.println("Volume of Cylinder is " + vol);

    }

    public static void cone(double r, double h){

        double l = Math.sqrt((h*h)+(r*r));
        double ar = (3.14*r)*(r+l);
        double vol = (3.14*r*r*h)/3;
        System.out.println("Area of Cone is " + ar);
        System.out.println("Volume of Cone is " + vol);

    }

    public static void sphere(double r, double h){

        double ar = (4*3.14*r*r);
        double vol = (4*3.14*r*r*r)/3;
        System.out.println("Area of Sphere is " + ar);
        System.out.println("Volume of Sphere is " + vol);

    }

    public static void main(String[] args){

        Scanner input = new Scanner(System.in);
        int x;
        double rad, h;
```

```
System.out.println("Enter the radius: ");
rad = input.nextDouble();
System.out.println("Enter the height");
h = input.nextDouble();
do{
    System.out.println();
    System.out.println("****MENU****");
    System.out.println("1. Cylinder");
    System.out.println("2. Cone");
    System.out.println("3. Sphere");
    System.out.println("4. Exit");
    System.out.println("Enter your choice: ");
    x = input.nextInt();
    switch(x){
        case 1: cylinder(rad, h);
        break;
        case 2: cone(rad, h);
        break;
        case 3: sphere(rad, h);
        break;
        case 4: System.exit(0);
        break;
        default: System.out.println("Invalid option");
        break;
    }
}while(x >= 0 && x <= 4);
}
}
```

```
Enter the radius:
10
Enter the height
10

***MENU***
1. Cylinder
2. Cone
3. Sphere
4. Exit
Enter your choice:
1
Area of Cylinder is 1256.0
Volume of Cylinder is 3140.0

***MENU***
1. Cylinder
2. Cone
3. Sphere
4. Exit
Enter your choice:
2
Area of Cone is 758.0630585851519
Volume of Cone is 1046.6666666666667

***MENU***
1. Cylinder
2. Cone
3. Sphere
4. Exit
Enter your choice:
3
Area of Sphere is 1256.0
Volume of Sphere is 4186.666666666667

***MENU***
1. Cylinder
2. Cone
3. Sphere
4. Exit
Enter your choice:
4

D:\Java>
```