```
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 = " + ar);
      System.out.println(" Vol of cylinder = " + 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 = " + ar);
      System.out.println(" Vol of cone = " + 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 = " + ar);
      System.out.println(" Vol of sphere = " + vol);
  }

  public static void main(String[] args) {
      Scanner s = new Scanner(System.in);
      int x; double rad, h;
      System.out.println(" Enter the radius");
      rad = s.nextDouble();
      System.out.println(" Enter the height");
      h = s.nextDouble();
```

```
do {
    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 = $.nextInt();
    switch(x) {
        case 1: cylinder(rad,h);
        break;
        case 2: cone(rad,h);
        break;
        case 3: sphere(rad,h);
        break;
        case 4: exit(0); System.exit(0);
        break;
        default: System.out.println("Invalid option");
    }
} while(x >= 0 && x <= 4);
}
}
```