

Week 8

Extra 1

```
import java.util.Scanner;  
abstract class Solid {  
    abstract void comp-Surface-area();  
    abstract void comp-Volume();  
}
```

```
class Cylinder extends Solid {  
    int r, h;  
    Cylinder(int r, int h) {  
        this.r = r;  
        this.h = h;  
    }
```

```
    void comp-Surface-area() {  
        System.out.println("Surface area of  
        cylinder = " + (2 * 3.14 * r * (r + h)))  
    }
```

```
    void comp-Volume() {  
        System.out.println("Volume of cylinder"  
        (3.14 * r * r * h));  
    }
```

```
class Cone extends Solid {  
    int r, h, l;  
    Cone(int r, int h, int l) {  
        this.r = r;  
        this.h = h;  
        this.l = l;  
    }
```


void comp-surface-area() {

System.out.println("Surface area of the cone=" + $(3.14 \times r \times (r + d))$);

}

void comp-volume() {

System.out.println("Volume of the cone=" + $(3.14 \times r \times r \times h) / 3$);

}

}

void Sphere extends Solid {

int r;

Sphere(int r) {

this.r = r;

}

void comp-surface-area() {

System.out.println("Surface area of sphere=" + $(4 \times 3.14 \times r \times r)$);

}

void comp-volume() {

System.out.println("Volume of sphere=" + $(4 \times 3.14 \times r \times r \times r) / 3$);

}

}

public class week8-extra-1 {

public static void main(String[] args)

{ Scanner s = new Scanner(System.in);

int radius, height, start-height;

System.out.println("Enter the radius and height of the cylinder respectively. :");

radius = s.nextInt();

height = s.nextInt();

Cylinder cy = new Cylinder(radius, height);

cy.compute-surface-area();

cy.compute-volume();

System.out.println("Enter the base radius,

Height and slant height of the cylinder
respectively:");

radius = S.nextInt();

height = S.nextInt();

slant-height = S.nextInt();

Cone co = new Cone(radius, height, slant-height);

co.comp-surf-area();

co.comp-volume();

System.out.println("Enter the radius of the sphere");

radius = S.nextInt();

Sphere sp = new Sphere(radius);

sp.comp-surface-area();

sp.comp-volume();

}