import java.util.Scanner;

interface Volume{

double pi = 3.14;

public void dispvolume();

public void readdata();

}

class cylinder implements Volume{

double r,h,vol;

public void readdata(){

Scanner in = new Scanner(System.in);

System.out.println("enter radius of cylinder");

r = in.nextInt();

System.out.println("enter height of cylinder");

h = in.nextInt();

vol = pi\*r\*r\*h;

}

public void dispvolume(){

System.out.println("volume of cylinder"+" " + vol);

}

}

class sphere implements Volume{

double r,vol;

public void readdata(){

Scanner in = new Scanner(System.in);

System.out.println("enter radius of sphere");

r = in.nextInt();

vol = (4/3\*pi)\*r\*r\*r;

}

public void dispvolume(){

System.out.println("volume of sphere" +" " +vol);

}

}

class Main {

public static void main(String[] args) {

int option;

System.out.println("1)cylinder , 2) sphere: ");

Scanner in = new Scanner(System.in);

option = in.nextInt();

if(option == 1){

cylinder cil = new cylinder();

cil.readdata();

cil.dispvolume();

}

else if (option == 2){

sphere sph = new sphere();

sph.readdata();

sph.dispvolume();

}

else{

System.out.println("invalid option");

}

}

}