JAVA PROGRAMMING CSE 1007

LAB EX 3

-AISHWARYA S 19BCE1709

1.

CODE:

```
import java.util.*;
import java.lang.*;
class film
{    String name;
   String actor;
   String category;
   String lang;
   int rtme;

   public film(String name, String  actor, String category, String lang, int
rtme)
   {
       this.name = name;
       this.actor = actor;
       this.category=category;
       this.lang=lang;
       this.rtme=rtme;

   }
   public film()
   {this.name = "xxxxxx";
       this.actor = "xxxxx";
       this.category="xxxxx";
       this.lang="xxxxxx";
       this.rtme=0;

   }
   public void getfilm()
   {    Scanner s= new Scanner(System.in);
       System.out.print("Enter the name of the film: ");
       String str= s.nextLine();
       this.name = str;

       System.out.print("Enter the name of the lead actor: ")  ;
       str= s.nextLine();
       this.actor = str;
```

```
        System.out.print("Enter the category: ")  ;
         str= s.nextLine();
         this.category = str;

        System.out.print("Enter the language : ")  ;
         str= s.nextLine();
         this.lang = str;

        System.out.print("Enter the runtime in minutes : ")  ;
        int n= s.nextInt();
        this.rtme=n;
        System.out.print("\n")   ;

    }
    public void printfilm()
    {
        System.out.print("Name: " +this.name+"  " );
        System.out.print("Actor: "+this.actor+"  ");
         System.out.print("Category: "+this.category+"  ");
         System.out.print("Language: "+this.lang+"  ");
         System.out.print("Duration: "+this.rtme+"  ");
         System.out.print("\n");
    }


}
class java31
{
    public static void main(String[] args)
    {   System.out.print("Aishwarya S 19BCE1709\n");
        Scanner s= new Scanner(System.in);
        Vector<film> films = new  Vector<film>(50);
        int min=9999, a=0,c=0,t=0,n =0;
        String[] arr= new String[10];

        String[] at= new String[10];
        if(args.length!=0)
        {
            film fn=new
film(args[0],args[1],args[2],args[3],Integer.parseInt(args[4]));
            films.add(fn);
        }
     film f=new film("Thalapathy", "Rajnikanth", "Drama","Tamil",200);
     film f1=new film("Terminator", "Arnold", "Action","English",107);
     film f2=new film("Total Recall", "Arnold", "Action","English",113);
```

```
    film f3=new film("Jingle All The Way", "Arnold", "Comedy","English",89);

    String n1="Shah Rukh Khan", n2 ="Rajnikanth";
    films.add(f);
    films.add(f1);
    films.add(f2);
    films.add(f3);
    System.out.print("Movies that already exist in the films list:  \n");
    for(int i=0;i<films.size();i++)
    { films.get(i).printfilm();
    }


    System.out.print("\nEnter the number of films you want to enter: ");
    n=s.nextInt();

    for(int i=0;i<n;i++)
    {  f= new film();
       f.getfilm();
       films.add(f);
    }

    for(int i=0;i<films.size();i++)
    {  if(films.get(i).lang.compareTo("Tamil")==0)
        { if(films.get(i).actor.compareTo(n1)==0 ||
films.get(i).actor.compareTo(n2)==0)
             {  at[t]=films.get(i).name;
               t++;

             }

        }

        if(films.get(i).actor.compareTo("Arnold")==0 &&
films.get(i).lang.compareTo("English")==0)
        { if(films.get(i).rtme<min)
             { min=films.get(i).rtme;

             }
        }

       if(films.get(i).category.compareTo("Comedy")==0)
        {  arr[a]=films.get(i).name;
           a++;
        }
```

```
    }
    System.out.print("A. The English film(s) that has Arnold as its lead
actor and runs for shortest duration:\n");

    for(int i=0;i<films.size();i++)
    {  if(films.get(i).rtme==min)
        {
            System.out.print(films.get(i).name+" ");

        }

   }
   System.out.print("\n");


   System.out.print("B. The Tamil movies with SRK or Rajnikanth as the lead
actor:\n");
   for(int i=0;i<t;i++)
   {
    System.out.print(at[i]+"   ");
   }
   System.out.print("\n");

    System.out.print("C. Comedy movies:\n");
    for(int i=0;i<a;i++)
   {
    System.out.print(arr[i]+"  ");

   }
     System.out.print("\n");



}
}
```

OUTPUT:

```
(base) Athena:19bce1709java carbon$ javac java31.java
(base) Athena:19bce1709java carbon$ java java31 2.0 Rajnikanth Thriller Tamil 150
Aishwarya S 19BCE1709
Movies that already exist in the films list:
Name: 2.0  Actor: Rajnikanth  Category: Thriller  Language: Tamil  Duration: 150
Name: Thalapathy  Actor: Rajnikanth  Category: Drama  Language: Tamil  Duration: 200
Name: Terminator  Actor: Arnold  Category: Action  Language: English  Duration: 107
Name: Total Recall  Actor: Arnold  Category: Action  Language: English  Duration: 113
Name: Jingle All The Way  Actor: Arnold  Category: Comedy  Language: English  Duration: 89

Enter the number of films you want to enter: 2
Enter the name of the film: Uyire
Enter the name of the lead actor: Shah Rukh Khan
Enter the category: Drama
Enter the language : Tamil
Enter the runtime in minutes : 158

Enter the name of the film: Baadshah
Enter the name of the lead actor: Shah Rukh Khan
Enter the category: Comedy
Enter the language : Hindi
Enter the runtime in minutes : 176

A. The English film(s) that has Arnold as its lead actor and runs for shortest duration:
Jingle All The Way
B. The Tamil movies with SRK or Rajnikanth as the lead actor:
2.0   Thalapathy   Uyire
C. Comedy movies:
Jingle All The Way  Baadshah
(base) Athena:19bce1709java carbon$
```

2.

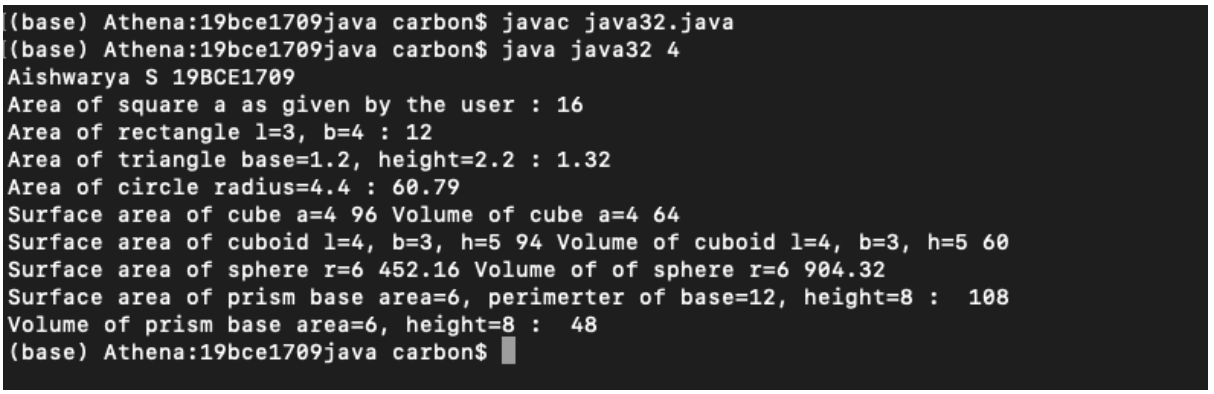
CODE:

```
import java.util.*;
import java.lang.*;
import java.text.*;
class TwoD
{    double pi=3.14;
   public int area(int a)
   {return (a*a);
    }
    public int area(int a, int b)
    { return (a*b);
   }
   public double area(double a, double b)
   {
       return (a*b/2);

   }
```

```
    public double area(double r)
    { return (this.pi*r*r);
    }
}
class ThreeD
{ double pi=3.14;
     public double volume(double r) // sphere
    { return (4*this.pi*r*r*r/3);
    }
    public double area(double r)
    { return (4*this.pi*r*r);
    }

    public  int volume(int a) //cube
    {  return (a*a*a);
    }
    public  int area(int a)
    { return (6*a*a);
    }


    public double volume(double r, double h) //cylinder
    { return (this.pi*r*r*h);
    }
    public double area(double r, double h)
    { return ((2*this.pi*r*r) + (2*this.pi*r*h));
    }


    public int volume(int l, int b, int h) //cuboid
    { return (l*b*h);
    }
    public int area(int h, int l, int b) //cuboid
    { return (2*(l*b+b*h+h*l));
    }


    public double volume(double a, int h) //right angle prism
    { return (a*h);
    }
    public double area(int p, double base, int h )
    { return (p*h +2*base);
    }
```

```
}
class GeometricMain
{    public static void main(String[] args)
   { ThreeD three = new ThreeD();
     TwoD two= new TwoD() ;
     int a=4;
     if(args.length!=0)
     {  a =Integer.parseInt(args[0]);
      }

     double base=1.2, height=2.2;
     DecimalFormat dff= new DecimalFormat("#.##");
     System.out.print("Aishwarya S 19BCE1709\n");
   System.out.print("Area of square a as given by the user : "+
two.area(a)+"\n");
   System.out.print("Area of rectangle l=3, b=4 : "+ two.area(3,4)+"\n");
   System.out.print("Area of triangle base=1.2, height=2.2 : "+
dff.format(two.area(base,height))+"\n");
   System.out.print("Area of circle radius=4.4 : "+
dff.format(two.area(4.4))+ "\n");

   System.out.print("Surface area of cube a=4 "+ three.area(4)+" ");
   System.out.print("Volume of cube a=4 "+ three.volume(4)+"\n");

   System.out.print("Surface area of cuboid l=4, b=3, h=5 "+
three.area(4,3,5)+" ");
   System.out.print("Volume of cuboid l=4, b=3, h=5 "+
three.volume(4,3,5)+"\n");

   System.out.print("Surface area of sphere r=6 "+
dff.format(three.area(6.0))+" ");
   System.out.print("Volume of of sphere r=6 "+
dff.format(three.volume(6.0))+"\n");

   System.out.print("Surface area of prism base area=6, perimerter of
base=12, height=8 :  "+  dff.format(three.area(12,6.0, 8))+"\n");
   System.out.print("Volume of prism base area=6, height=8 :  "+
dff.format(three.volume(6.0,8))+"\n");



   }

}
```

OUTPUT:


(base) Athena:19bce1709java carbon$ javac java32.java
(base) Athena:19bce1709java carbon$ java java32 4
Aishwarya S 19BCE1709
Area of square a as given by the user : 16
Area of rectangle l=3, b=4 : 12
Area of triangle base=1.2, height=2.2 : 1.32
Area of circle radius=4.4 : 60.79
Surface area of cube a=4 96 Volume of cube a=4 64
Surface area of cuboid l=4, b=3, h=5 94 Volume of cuboid l=4, b=3, h=5 60
Surface area of sphere r=6 452.16 Volume of of sphere r=6 904.32
Surface area of prism base area=6, perimerter of base=12, height=8 : 108
Volume of prism base area=6, height=8 : 48
(base) Athena:19bce1709java carbon$