# Program:

package pkginterface;

import java.util.\*;

interface Shape

{

void values();

void area();

void perimeter();

}

class Rectangle implements Shape

{

int l,b;

double area,peri;

Scanner s=new Scanner(System.in);

public void values()

{

System.out.println("\nEnter Length and Breadth");

l=s.nextInt();

b=s.nextInt();

}

public void area()

{

area=l\*b;

System.out.println("Area :" + area);

}

public void perimeter()

{

peri=(l+b)\*2;

System.out.println("Perimeter :"+peri);

}

}

class Square implements Shape

{

Scanner s=new Scanner(System.in);

int a;

double area,peri;

public void values()

{

System.out.println("\nEnter Length of side");

a=s.nextInt();

}

public void area()

{

area=a\*a;

System.out.println("Area :"+area);

}

public void perimeter()

{

peri=4\*a;

System.out.println("Perimeter :"+peri);

}

}

class Triangle implements Shape

{

int a,b,c;

double area,s,peri;

Scanner in=new Scanner(System.in);

public void values()

{

System.out.println("\nEnter Length of Sides");

a=in.nextInt();

b=in.nextInt();

c=in.nextInt();

s=(a+b+c)/2;

}

public void area()

{

area=Math.sqrt(s\*(s-a)\*(s-b)\*(s-c));

System.out.println("Area :"+area);

}

public void perimeter()

{

peri=2\*s;

System.out.println("Perimeter :"+peri);

}

}

class Circle implements Shape

{

Scanner s=new Scanner(System.in);

int r;

double area,peri;

public void values()

{

System.out.println("\nEnter Radius");

r=s.nextInt();

}

public void area()

{

area=3.14\*r\*r;

System.out.println("Area :"+area);

}

public void perimeter()

{

peri=2\*3.14\*r;

System.out.println("Perimeter :"+peri);

}

}

public class Intershapes

{

public static void main(String arg[])

{

int ch,d = 1;

Scanner in=new Scanner(System.in);

do

{

System.out.println("\nEnter Your Choice");

System.out.println("1.Rectangle\n2.Square\n3.Triangle\n4.Circle\n5.Exit");

ch=in.nextInt();

switch(ch)

{

case 1:

Rectangle r=new Rectangle();

r.values();

r.area();

r.perimeter();

break;

case 2:

Square sq=new Square();

sq.values();

sq.area();

sq.perimeter();

break;

case 3:

Triangle t=new Triangle();

t.values();

t.area();

t.perimeter();

break;

case 4:

Circle c=new Circle();

c.values();

c.area();

c.perimeter();

break;

case 5:

d=0;

break;

default:

System.out.println("Invalid Option! Try Again...");

}

}while(d==1);

}

}

# Output:

Enter Your Choice

1.Rectangle

2.Square

3.Triangle

4.Circle

5.Exit

1

Enter Length and Breadth

6

5

Area :30.0

Perimeter :22.0

Enter Your Choice

1.Rectangle

2.Square

3.Triangle

4.Circle

5.Exit

3

Enter Length of Sides

5

6

9

Area :14.142135623730951

Perimeter :20.0

Enter Your Choice

1.Rectangle

2.Square

3.Triangle

4.Circle

5.Exit

5

BUILD SUCCESSFUL (total time: 21 seconds)