/\* WAP USING FUNCTION OVERLOADING TO CALCULATE AREA OF CIRCLE, SQUARE, RECTANGLE, RIGHT TRIANGLE AND TRIANGLE USING HERON’S FORMULAE \*/

#include<iostream.h>

#include<math.h>

#include<conio.h>

float area(float p)

{

return 3.14\*p\*p;

}

float area(int p)

{

return p\*p;

}

float area(float p,float q)

{

return p\*q;

}

float area(int p, int q)

{

return (0.5\*p\*q);

}

float area(float p,float q, float r)

{

float s;

s=(p+q+r)/2;

return sqrt(s\*(s-p)\*(s-q)\*(s-r));

}

void main()

{clrscr();

int p,q,ch;

float a,b,r;

char choice;

do{

cout<<"\n\nChoose from the following : ";

cout<<"\n\n1. Area of square ";

cout<<"\n\n2. Area of circle ";

cout<<"\n\n3. Area of rectangle ";

cout<<"\n\n4. Area of right triangle ";

cout<<"\n\n5. Area of triangle ";

cout<<"\n\nEnter your choice : "; cin>>ch;

switch(ch)

{

case 1: cout<<"\n\nEnter side of square : ";

cin>>p;

cout<<"\n\narea of square is : "<<area(p);

break;

case 2: cout<<"\n\nEnter radius of circle : ";

cin>>a;

cout<<"\n\narea of circle is : "<<area(a);

break;

case 3: cout<<"\n\nEnter length of rectangle : ";

cin>>a;

cout<<"\n\nEnter breadth of rectangle : ";

cin>>b;

cout<<"\n\narea of rectangle is : "<<area(a,b);

break;

case 4: cout<<"\n\nEnter base and altitude of right triangle : ";

cin>>p;

cin>>q;

cout<<"\n\narea of right triangle is : "<<area(q,p);

break;

case 5: cout<<"\n\nEnter sides of triangle : ";

cin>>a;

cin>>b;

cin>>r;

cout<<"\n\narea of triangle is : "<<area(a,b,r);

break;

}

cout<<"\n\nWant to choose again : ";

cin>>choice;

}while(choice=='y'||choice=='Y');

getch();

}

Output:

Choose from the following :

1. Area of square

2. Area of circle

3. Area of rectangle

4. Area of right triangle

5. Area of triangle

Enter your choice : 1

Enter side of square : 5

area of square is : 25

Want to choose again : y

Choose from the following :

1. Area of square

2. Area of circle

3. Area of rectangle

4. Area of right triangle

5. Area of triangle

Enter your choice : 2

Enter radius of circle : 2.5

area of circle is : 19.625

Want to choose again : y

Choose from the following :

1. Area of square

2. Area of circle

3. Area of rectangle

4. Area of right triangle

5. Area of triangle

Enter your choice : 3

Enter length of rectangle : 4.2

Enter breadth of rectangle : 5.1

area of rectangle is : 21.419998

Want to choose again : y

Choose from the following :

1. Area of square

2. Area of circle

3. Area of rectangle

4. Area of right triangle

5. Area of triangle

Enter your choice : 4

Enter base and altitude of right triangle : 2

5

area of right triangle is : 5

Want to choose again : y

Choose from the following :

1. Area of square

2. Area of circle

3. Area of rectangle

4. Area of right triangle

5. Area of triangle

Enter your choice : 5

Enter sides of triangle : 3

4

5

area of triangle is : 6

Want to choose again : n