

Experiment 11: Write a program that accepts the length of three sides of a triangle as inputs. The program should indicate whether or not the triangle is a right-angled triangle (Use Pythagorean theorem). Also find out its area using Heron's formula.

CODE:

```
def is_right_angled(a,b,c):
    sides=[a,b,c]
    sides.sort()
    if sides[0]**2 + sides[1]**2 == sides[2]**2:
        print("It's a right angled triangle")
    else:
        print("It's not a right angled triangle")

def claculate_area(a,b,c):
    #Calculate the area using Heron's formula
    s=(a+b+c)/2
    area =(s*(s-a)*(s-b)*(s-c))**0.5
    print("Area of the triangle: ",area)

# Get input from the user
side_a = float(int(input("Enter the length of side a: ")))
side_b = float(int(input("Enter the length of side b: ")))
side_c = float(int(input("Enter the length of side b: ")))

# Check if it's a right-angled triangle
is_right_angled(side_a,side_b,side_c)

# Area of triangle usingn Heron's formula
claculate_area(side_a,side_b,side_c)
```

OUTPUT:

```
Enter the length of side a: 5
Enter the length of side b: 12
Enter the length of side b: 13
It's a right angled triangle
Area of the triangle: 30.0
```