

CSE 1110 – ICS – Home Assignment

Total Marks: 20

Deadline: 04.05.24 (before 11:59 PM)

1. Write a C program that assists in the computation of the area of various geometrical shapes. The user will first give a choice from the following options:

- 1 - Calculate the area of a Triangle [Area = 0.5 * Base * Height]
- 2 - Calculate the area of a Rectangle [Area = Length * Width]
- 3 - Calculate the area of a Circle [Area = 3.14 * (Radius)²]

Upon making a choice, the user will then input the necessary information based on their choice:

For option 1 (Triangle), the user provides the base and height.

For option 2 (Rectangle), the user provides the length and width.

For option 3 (Circle), the user provides the radius.

Subsequently, the program will perform the appropriate calculations and print the computed area of the chosen shape. [10]

Sample input	Sample output
1 2 3	The area of the triangle with base 2 and height 3 is 3.
2 2 3	The area of the rectangle with length 2 and width 3 is 6.
3 2	The area of the circle with radius 2 is 12.56.

2. Write a C Program to check whether the triangle is an equilateral, isosceles or scalene triangle. Using the if-else statement.

Equation to find distance of 2 points : $\sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

Hints : If none of the sides of a triangle are equal (of equal length), the triangle is scalene. If two or more of the triangles sides are equal, the triangle is isosceles. If all three of the sides of a triangle are equal, it is equilateral. [10]