

C/C++ Programming in UNIX

Lab 08

Write all your code in a single source code file

Given the structure Point as below

```
struct Point {  
    float x;  
    float y;  
};
```

1. Declare a structure to represent a triangle. Write the input and output function for the new structure
2. Write a function ***isTriangle*** to check whether 3 given points form a triangle or not?
3. Write a function ***isEqual*** to check whether 2 given triangles are equal
4. Write a function to get the perimeter of a given triangle
5. Write a function to get the area of a given triangle
6. Write a function to find the centroid of the triangle (center point)
7. Write a function to find the orthocenter of the triangle (intersect of 3 heights)
8. Write a function ***isInsideTriangle*** to check whether a given point is laid inside the triangle or not
9. Write a function to check the type of the triangle: Equilateral, Isosceles, Right triangle, Isosceles right triangle, or Scalene