

C++ Inheritance

Instructions for submission: PPL Assignment 6

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Problem Statement:

Write a program to implement various types of geometrical shapes like circle, triangle, square, polygon, and octagon. Circle, triangle, square, polygon, octagon are child classes of base class shape; Square is a polygon, octagon is a polygon.

Objectives:

1. To implement Classes and Objects in C++.
2. To demonstrate the inheritance property of a C++ Class.

Execution:

Steps to execute and submit the assignment:

1. Write a C++ Program with **class Shape** which contains the declaration of two **protected** methods to ***CalculateArea()*** and ***CalculatePerimeter()***.
2. **Inherit** various classes like Circle, Triangle, Square, Polygon etc. with **private data members** (radius/no. Of sides/ length of each side).
3. In the Inherited classes, define respective constructors to read the data members and redefine the functions to calculate area and perimeter with respective formulae and print the same.
4. Create objects of these various classes and implement inheritance in C++.
5. Compile the C program in debug mode using **>gcc -g file6.c and run it.**
6. Paste the output in the file itself and create a single pdf with your code and output for submission.