

Assignment 2

Submission Date: 21.09.2023

Section 1

1. Point Class

1. Create a class Point with xcod and ycod as data members. Include member functions to read and print the coordinate values as getPoint() and showPoint() respectively. Write a main method to demonstrate the Point class.

2. Inherit Circle from point

2a. Create a class called Circle with radius as data member and getCircle(), calcRad, calcArea() as member functions to read two points, 1. centre, 2. any point in orbit and calculate the radius and area of the circle.

2b. Create another class called Cone which is derived from the Circle class. Have a data member apex and utilize the existing data members and the member functions of the base class by the derived class to find the volume $((1/3)*3.14*r*r*h)$ of a cone.

3. Regular Polygon

3a. Inherit Regular_Polygon from point. Have points_array and num_sides as a data members and have function for getting details.

3b. Inherit any polygon from Regular_Polygon Like square, have additional functions to calculate area, perimeter and volume.

Section 2

Relate any two classes of your choice with **is a** relationship and implement.