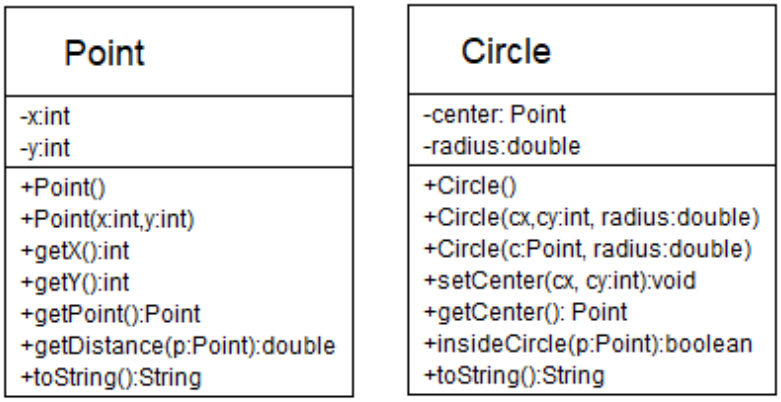
1. The UML class diagram of two classes, Point and Circle are given below. All the constructors of Circle class assign appropriate values passed as parameters for the center and radius. For the no-argument constructor, invoke the second constructor to set all values to 0. Most of the methods of Circle class are self-explanatory. The setCenter() method assigns a new center with the given values. The getCenter() method returns a copy of the center of a Circle object. The insideCircle() method returns true when point p is inside a circle. You need to compute distance between center and the point, when the difference is less than radius it is inside the circle. Use getDistance() method of Point class to get the distance. The toString() method returns a string in the form like "The center of the circle is (x,y) with radius z".



   a. Define the **Circle** class. Do NOT define the Point class. [10]
   b. Write code segment to create an object of Circle c1 by calling third constructor. Assume some appropriate initial values. [2]
   c. Write code segment to see whether (4,5) is inside circle c1 or not. [2]
   d. Write code segment to display the information of c1 Circle with area. [1]

2. What is constructor chaining? Describe with an example. [5]