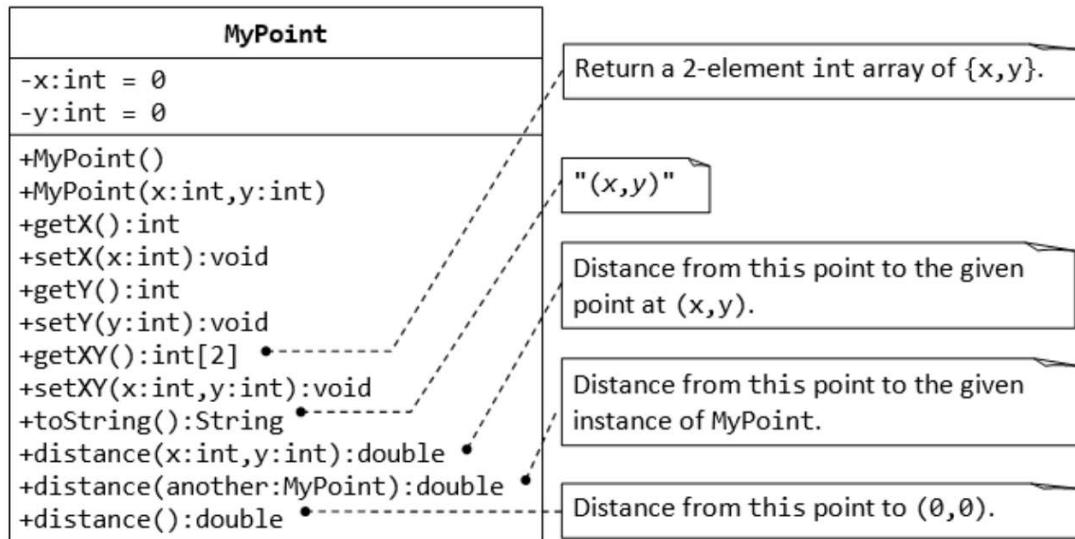


MIT Lab Exam
Institute of Information Technology, University of Dhaka
Marks: 20, Time 45 Min

A class called MyPoint, which models a 2D point with x and y coordinates, is designed as shown in the class diagram. It contains:



- Two instance variables x (int) and y (int).
- A default (or "no-argument" or "no-arg") constructor that constructs a point at the default location of (0, 0).
- An overloaded constructor that constructs a point with the given x and y coordinates.
- Getter and setter for the instance variables x and y.
- A method setXY() to set both x and y.
- A method getXY() which returns the x and y in a 2-element int array.
- A toString() method that returns a string description of the instance in the format "(x, y)".
- A method called distance(int x, int y) that returns the distance from this point to another point at the given (x, y) coordinates.
- An overloaded distance(MyPoint another) that returns the distance from this point to the given MyPoint instance.
- Another overloaded distance() method that returns the distance from this point to the origin (0,0).