Lab – 6
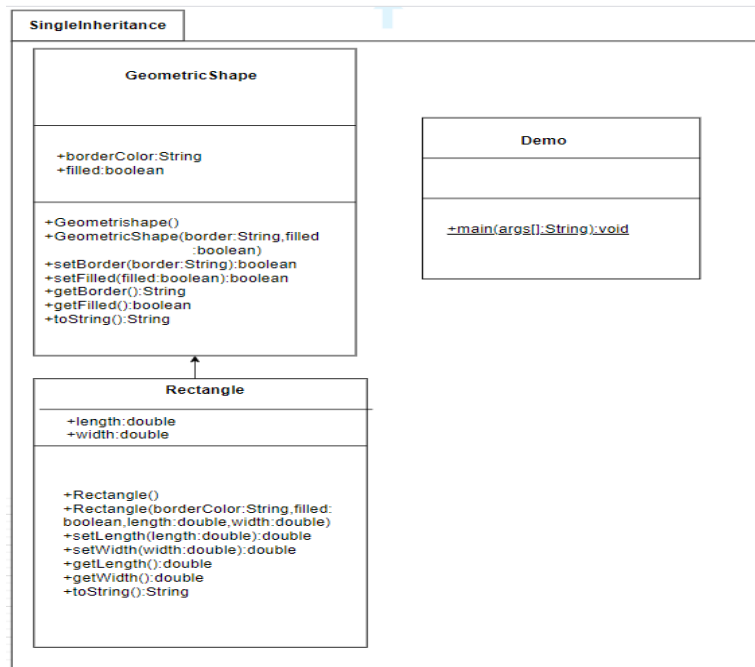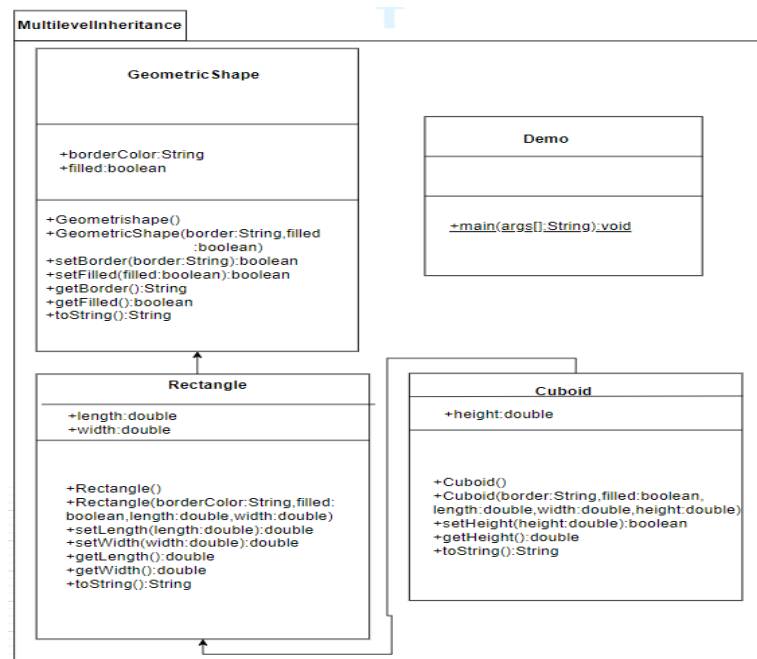
1. **Simple/Single Inheritance :**
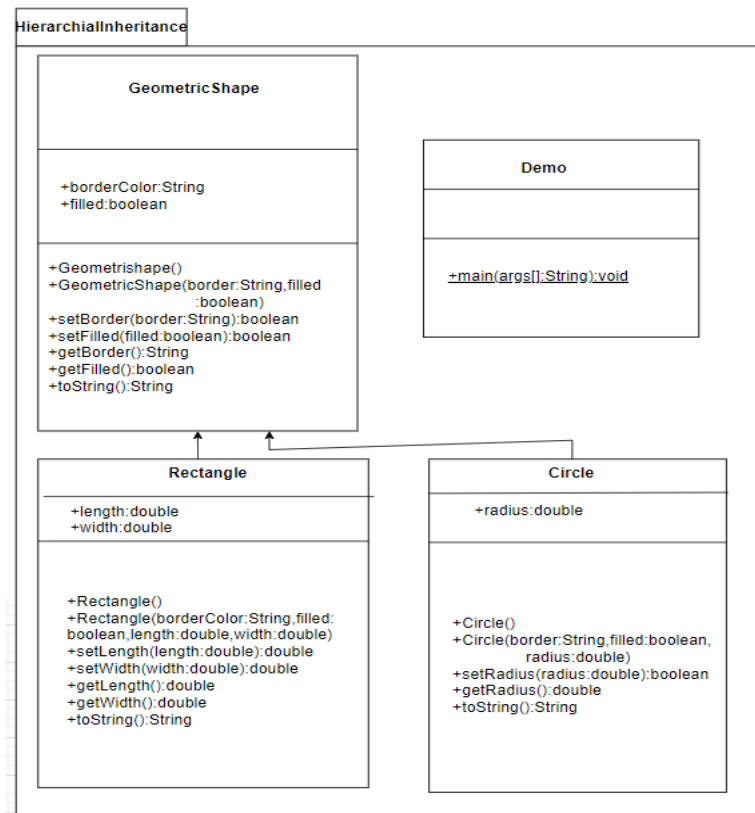

Create a class GeometricShape with attributes borderColor (String), filled (Boolean type). This is inherited by Rectangle Class with length and width as attributes. Add mutators, accessors and toString() methods.

2. **Multilevel Inheritance :**

Enhance the above design where Cuboid class with height field inherits the Rectangle class.

3. Hierarchy Inheritance :

GeometricShape

+borderColor:String
+filled:boolean

+Geometrishape()
+GeometricShape(border:String,filled
                    :boolean)
+setBorder(border:String):boolean
+setFilled(filled:boolean):boolean
+getBorder():String
+getFilled():boolean
+toString():String

Demo

+main(args[]:String):void

Rectangle

+length:double
+width:double

+Rectangle()
+Rectangle(borderColor:String,filled:
boolean,length:double,width:double)
+setLength(length:double):double
+setWidth(width:double):double
+getLength():double
+getWidth():double
+toString():String

Circle

+radius:double

+Circle()
+Circle(border:String,filled:boolean,
              radius:double)
+setRadius(radius:double):boolean
+getRadius():double
+toString():String

Enhance the design of Simple Inheritance where Circle class with radius field also inherits from GeometricShape.