

## Report Lab 2 OOP

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### PolygonalRegion

This class contains a linked list of points.

The class PolygonalRegion has the following methods:

**double getArea()** which computes a determinant of size nx2 with the Points in the linked list of points and returns the area of the convex polygon.

**double getDeterminant()** which computes the determinant of the list of points and returns its value.

**void draw()** which draws a polygon using the function drawPolygon from the Graphics class which has as inputs an array of int with the 'x' values of the list of points, another array of int with the 'y' values and the number of points.

### Continent

This class contains a linked list of PolygonalRegion.

The class Continent has the following methods:

**double getTotalArea()** which computes the area of the continent by adding all the areas in the PolygonalRegion (countries) in that continent.

**void draw()** which calls the method draw of the class PolygonalRegion to all the countries (PolygonalRegions) of the continent.

### World

This class contains a linked list of continents.

The class Continent has the following methods:

**void draw()** this method basically uses the list of continents and prints them using the draw function defined at **PolygonalRegion**