

Report Lab 3 OOP

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City (extends GeoPoint)

This class contains an integer that stores the number of habitants.

The class City has the following methods:

draw() which calls the method draw of the super class (GeoPoint)

Country (extends PolygonalRegion)

This class contains a string with the name of the country, a list of cities with the cities of the country, a list of countries with the neighbours of that country, and a City which stores the capital of the country.

The class Country has the following methods:

void addCity() which adds a city into the list of cities (cities)

void addNeighbor() which adds a country into the list of countries (neighbors)

void draw() which iterates over all the cities of the country and draws them with their name. It also draws the capital and the name of the country near it.

EllipsoidalRegion (extends Region)

This class contains a point and 2 doubles with the radius of the ellipse.

The class EllipsoidalRegion has the following methods:

double getArea() it returns the area of the ellipsoidal region.

void draw() it draws the ellipsoidal region using drawOval from the class graphics.

GeoPoint (extends Point)

This class contains a string with the name of the GeoPoint.

The class GeoPoint has the following methods:

void draw() which first transforms all the measurements for the oval from doubles to integers and then calls drawOval and also draws the name of the GeoPoint.

Ocean (extends PolygonalRegion)

The class Ocean has the following methods:

double getArea() which computes and returns the area of the ocean

void draw() which creates a new RGB color with the blue components (0, 255, 255) sets the graphics to that color and then it draws the ocean just like the polygonal region but with fillPolygon instead of drawPolygon. Then changes the graphics color again to black.

Lake (extends Ocean)

The class Lake has the following methods:

double getArea() which computes and returns the area of the lake

void draw() which calls the draw method of the super class