

Submission report - Lab 2: Implementing a program design

24292-Object Oriented Programming

The main idea of the project is to design an application that displays a map implementing classes for turtle, logo, program, instruction, logo window, which we will explain in detail further on. What the program should primarily do is showing a screen where we have a turtle. The turtle draws figures, or straight lines depending on the commands given, which have been declared by the programmer in a main function.

We have six classes, one of which is main class where we execute the turtle's commands. We called the main class MainLogoProgram.java. Next, we have the Instruction class and Program class which we copied from the previous lab (1). Next, we have the turtle class, where we initialize the turtle. Inside the turtle class we have constructor method and other methods like forwards, draw and turn. Next, we have the logo class, which initializes the program logo window, has the construction method, and reset turtle method that resets the turtle position, and method that executed will use a program as input and also the Graphics class to draw the result of that program. Lastly, we have the LogoWindow.java class which is created from GUI project and the main class LogoWindow that inherits from JFrame. Inside this class we initialize the window on which we paint with the turtle.

Moreover, we practiced the implementation of theoretical concepts studied in the theory sessions. The ones we implemented are application of fundamental concepts of classes, instances, methods and attributes, also visibility, the keyword this and how to define relations between different classes.

Overall, at the beginning we had no idea how to use the project with graphical interface as we had never worked with one like this before. Also, we found some difficulties in calling methods from one class in another class. Luckily, at the end we managed to make everything work correctly and now the program draws the world and computes its area.