Step 1 – Introduction

Wow, so exciting! First step on the road to mastering the course PGR112 - Object Oriented Programming
Objectives for this step on the ladder:

- I can install IntelliJ (Community edition).
- I can create and run a Java program.
- I have become a little familiar with how the user interface of IntelliJ works.
- I have done my best to understand how a "Hello world" program in Java works.
- I know the terms JRE, JDK and JVM and know what they mean.
- I can run a Java program outside of IntelliJ.

Task 1 - Install IntelliJ

You do not need an Integrated Development Environment (IDE) to write and run Java code. But it makes the job easier. We use IntelliJ in this topic. You can choose to use a different IDE, but I do NOT recommend it. It is a great advantage that we choose a common IDE. Then it will be easier to help each other.
Here is a handy link that will help you along the way. Remember that you only need the Community Edition (which is free):
https://www.jetbrains.com/help/idea/installation-guide.html
If you are stuck, then you know that you have many good fellow students and supervisors who are ready to help you.

Task 2 - Create and run a Java application

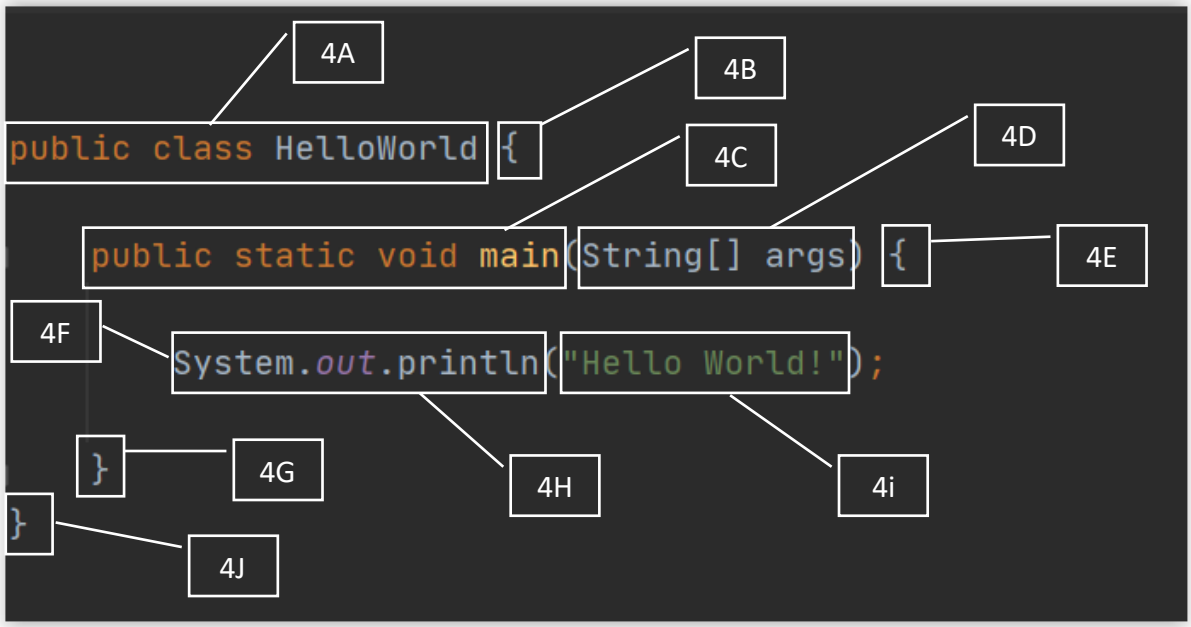
In programming, it is very common to create a "Hello World" program as an introduction to a language. This also applies to Java. And you're not one of the first in the world to learn Java. Java is a widely used language, and has been for many years. Therefore, there are many resources we can use to learn the language. An example of this is the following link that shows you how to create a "Hello World" program in Java using IntelliJ. The website includes both a textual description and an explanation in video format. Then you can choose - hurray! 😊
https://www.jetbrains.com/help/idea/creating-and-running-your-first-java-application.html

Task 3 - Get to know the IntelliJ user interface

How you attack this task is a bit up to you. Maybe you are someone who likes to try your hand at it? Or maybe you like to get an overall description first? In that case you can, for example, use this:
https://www.jetbrains.com/help/idea/guided-tour-around-the-user-interface.html
You have already created your first Java program. Feel free to use the program to explore the user interface of IntelliJ. Do not panic if you think IntelliJ is a comprehensive project to get acquainted with. We will use it throughout the semester, and you will become better acquainted with it along the way.

Exercise 4 - We "dissect" Hello World

So great that you have managed to create and run a Java application! But why does the program work? What are the different pieces the program consists of?
In this exercise you will try to explore the different components of a "Hello World" program that I have a picture of below. You are not meant to understand everything in detail. We have just started. But let's see what you can do. I have named different parts of the program (4A-4J). If you can find out what a part is / does, then feel free to share in Mattermost/Discord. Then remember to refer to which piece you have found out something about, and preferably a source who helped you. I'll go through the code (and its parts) in the collection at the end of the session. Here is the picture:



Task 5 - Running Java application outside of IntelliJ

Yes, we use IntelliJ in this topic. We could have chosen a different IDE, and you can create Java applications without an IDE. Therefore, it's good to see, with your own eyes, that you're able to run a Java application outside of IntelliJ. In Exercise 2, you created "Hello World" and the website also described how to package the program in a JAR file. Since you installed IntelliJ, you also installed Java on your computer (if you did not already have one).
This is an open task where I do not give you a specific link to follow. The details of how to solve the task will also depend somewhat on your OS. If you find a handy link to help you along the way, feel free to share it in Mattermost.

Exercise 6 - JRE, JDK and JVM

Hmm, what are these J **s? They are well-known acronyms when we work with Java. And you may remember from Exercise 2 that we had to choose a JDK in IntelliJ? Therefore, you should know these acronyms. If you like textual description, I hope you like it:
https://www.guru99.com/difference-between-jdk-jre-jvm.html

Or are you more keen on a video? Then you can use the link below. There is some advertising in the beginning, but then Tim is a racer to explain…
https://www.youtube.com/watch?v=BXFHuaQNnLo

So, are you done with all the tasks? Brilliant! Maybe you can spend 1 minute reporting about how it went in this session? Here is a link to the anonymous form you can fill out.