Programare avansata pe obiecte

Daniel Ungureanu
daniel.ungureanu@endava.com

1. Evaluare

- Proiect laborator
    - Proiectul va consta intr-o aplicatie in care vom pune in practica ceea ce vom invata in acest semestru
    - Acesta va fi structurat in 3 etape (3p/3p/4p)
    - Conditii de punctare: nu trebuie sa aiba erori de compilare si sa se implementeze cerintele date

2. Prerequisites

2.1. Java

What is Java?

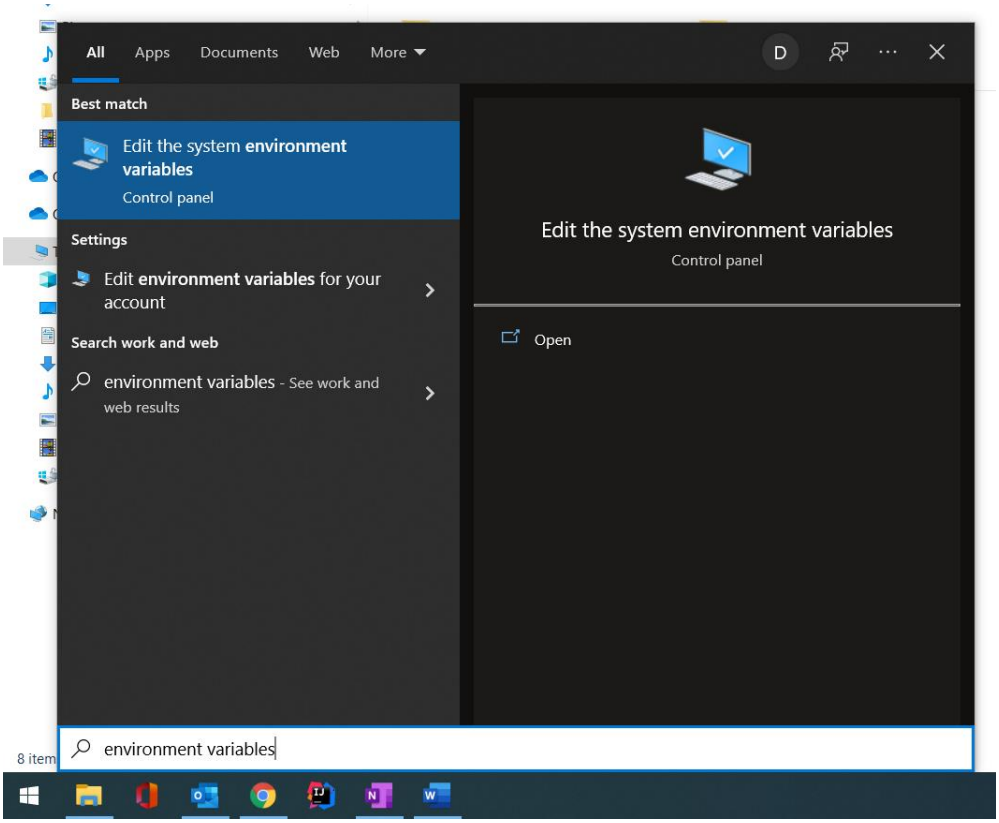
- JRE Java Runtime Environment
- JDK Java Development Kit

What version of Java to use?

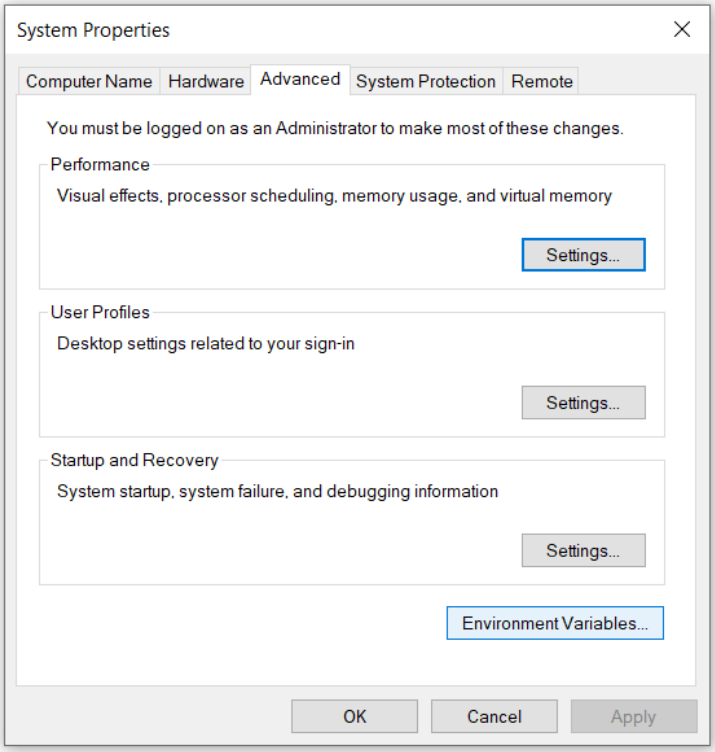
- Java versions: https://www.java.com/releases/fullmatrix/
    - Oracle roadmap https://www.oracle.com/java/technologies/java-se-support-roadmap.html useful for checking LTS (Long term support) versions

- Download and Install Java (note, we will need the JDK to do our programming):
    - https://www.oracle.com/java/technologies/downloads/#jdk17-windows
        - Guide: https://docs.oracle.com/en/java/javase/17/install/installation-jdk-microsoft-windows-platforms.html#GUID-A7E27B90-A28D-4237-9383-A58B416071CA
    - https://adoptium.net/
        - Guide: https://adoptium.net/installation.html

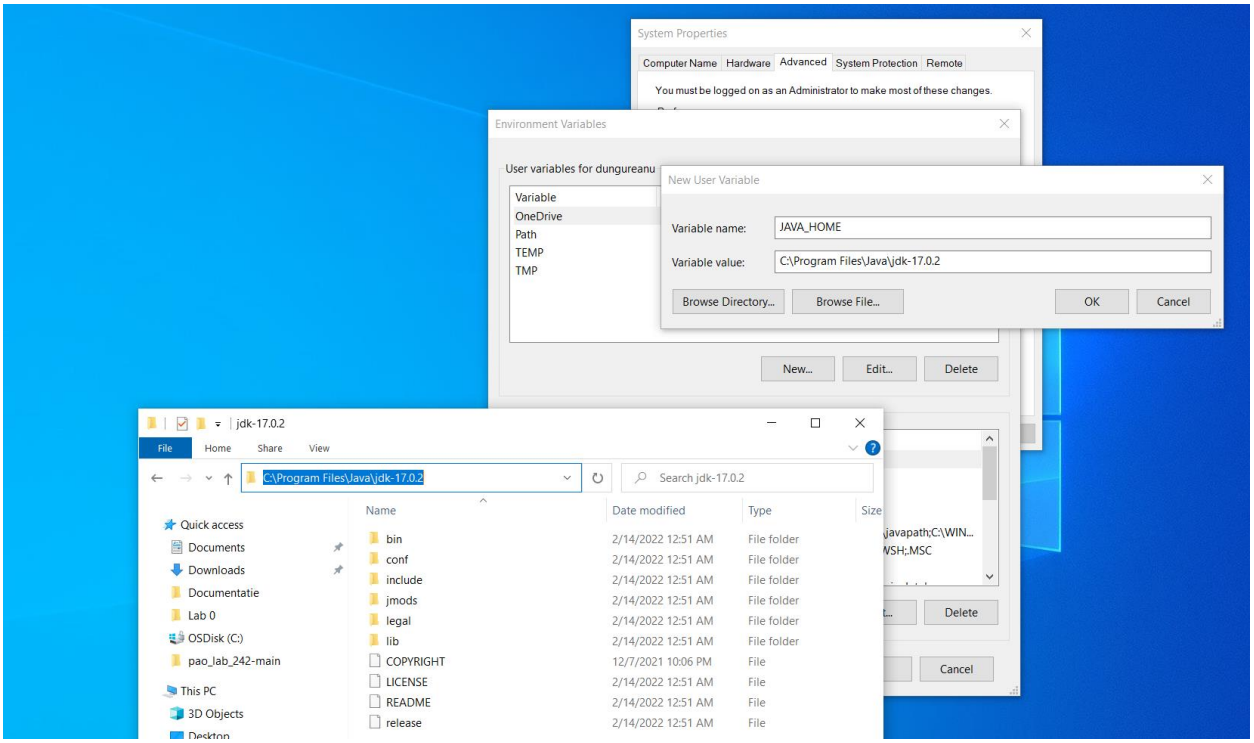
- Update Environment Variables to be able to run the Java commands:
    - Click on Start/Windows Icon and start typing “environment variables”
    - Select “Edit the system environment variables”



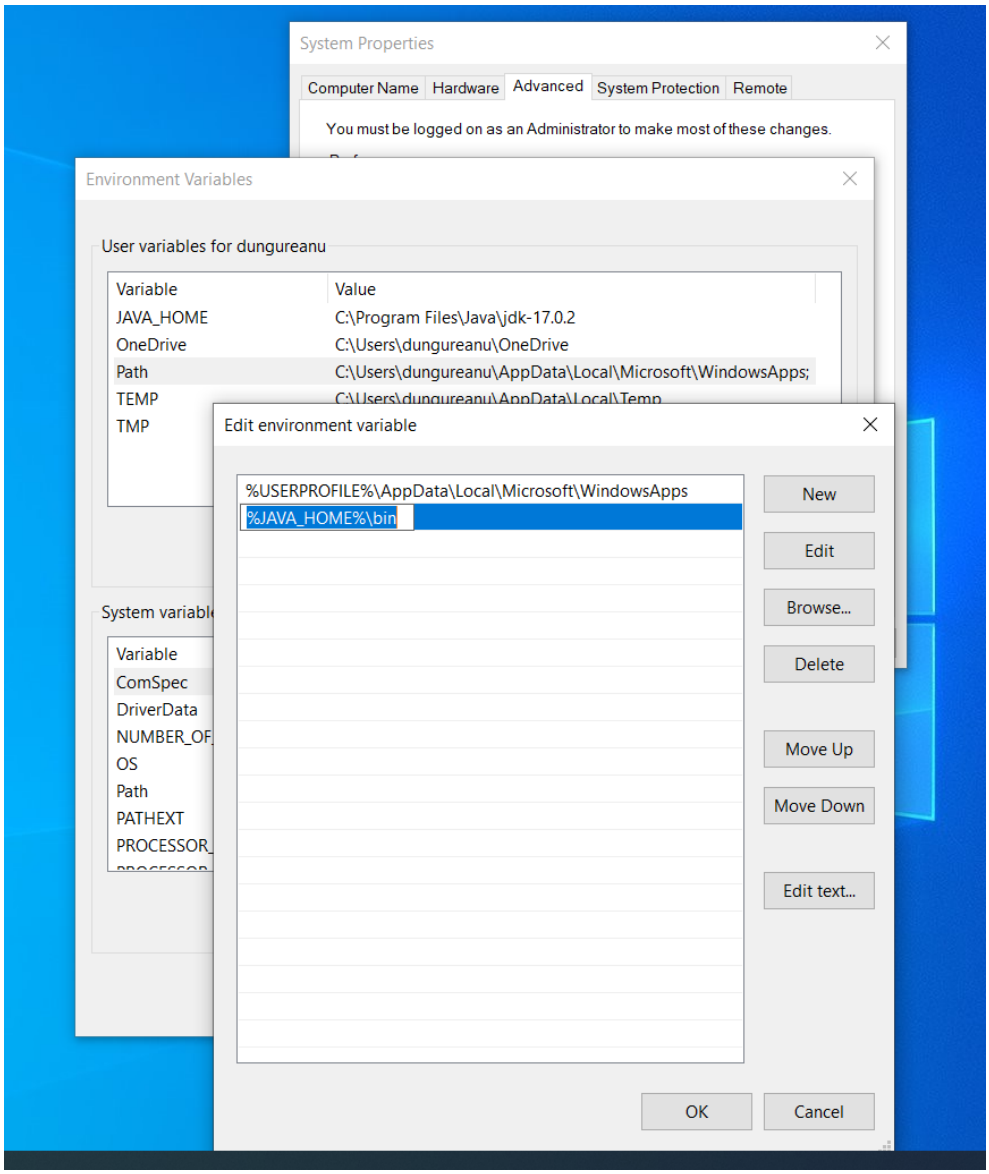
- Click on “Environment Variables…”



- Create a new variable “**JAVA_HOME**” and set the value to be the Installation path for Java JDK



- Update the existing Path variable and add a new line with “**%JAVA_HOME%\bin**”



- Test to see if it's working (run "java --version" in the command line)

```
C:\Users\dungureanu>java --version
java 17.0.2 2022-01-18 LTS
Java(TM) SE Runtime Environment (build 17.0.2+8-LTS-86)
Java HotSpot(TM) 64-Bit Server VM (build 17.0.2+8-LTS-86, mixed mode, sharing)
```

2.2. IDE for Java

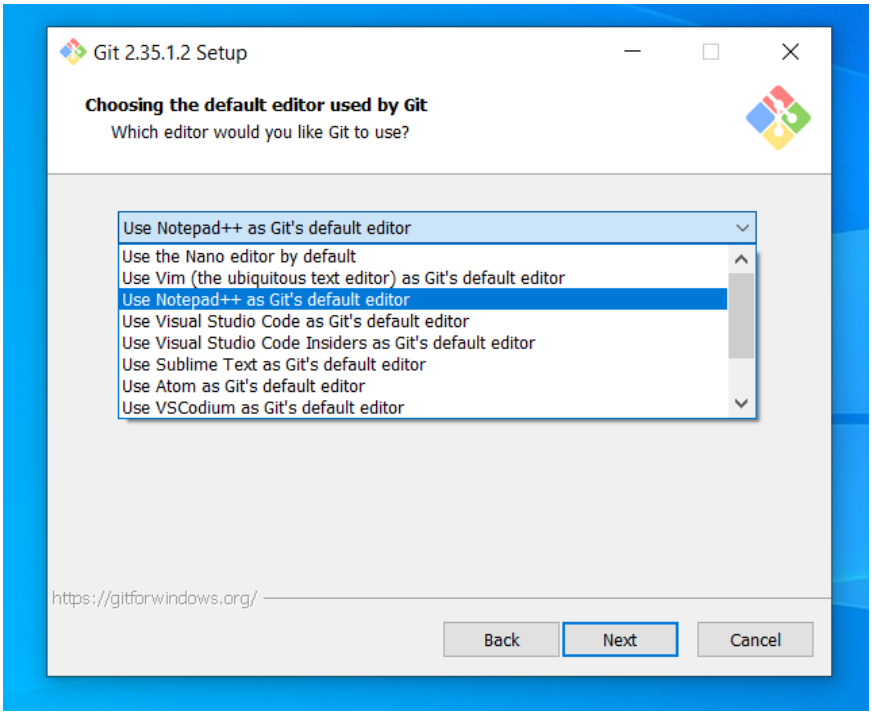
- IntelliJ: https://www.jetbrains.com/idea/
- Eclipse: https://www.eclipse.org/

2.3. Hello World! (wave)

Live coding

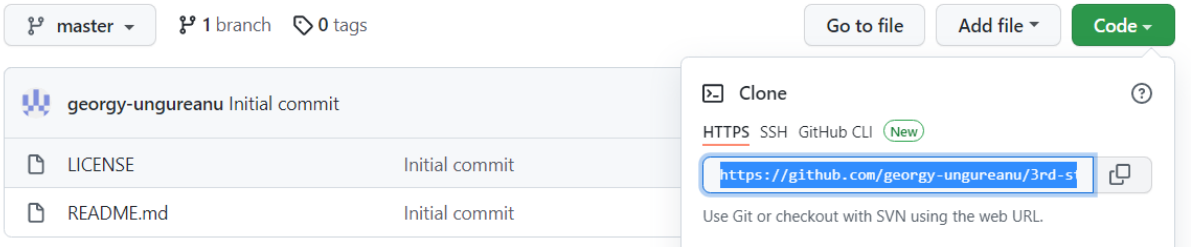
2.4. Version control

- **Git**
  - https://git-scm.com/
    - Download from: https://git-scm.com/download/win
    - While doing the installation, you may want to change the default text editor from Vim to something else

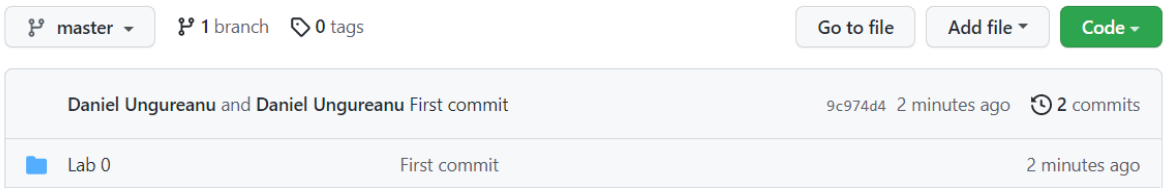


- **GitHub**
  - https://github.com/
    - Create user: https://github.com/signup
    - Create repository: https://github.com/new

- **Git Bash**
  - Open Git Bash and navigate to a folder where you want to store your code
  - Here clone your newly created repository
    - **git clone** https://github.com/...



- Copy the Java files in the generated folder
- Check the status of the repository
    - **git status**
- Select the files that you would want to commit/save to your repository
    - **git add .**
- Create a commit
    - **git commit -m "First commit"**
- Push the code
    - **git push**
- Check to see your if the code is available in GitHub



2.5. Notes

- There are no stupid questions
- Google (any search engine) is your friend
- Good read: https://www.goodreads.com/book/show/3735293-clean-code
    - Interesting person to follow: Robert C. Martin a.k.a. Uncle Bob