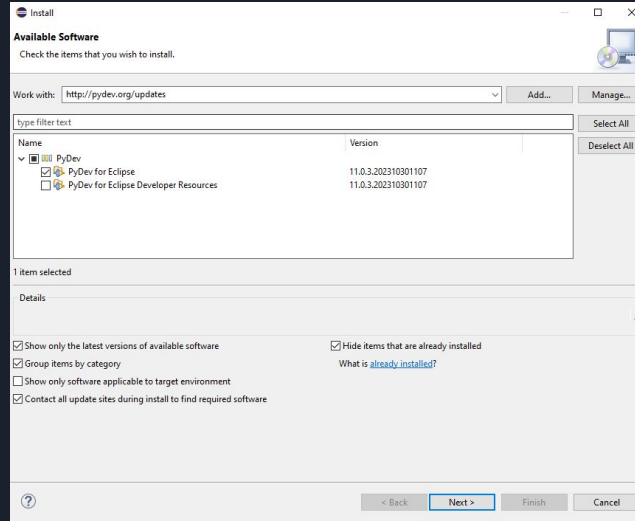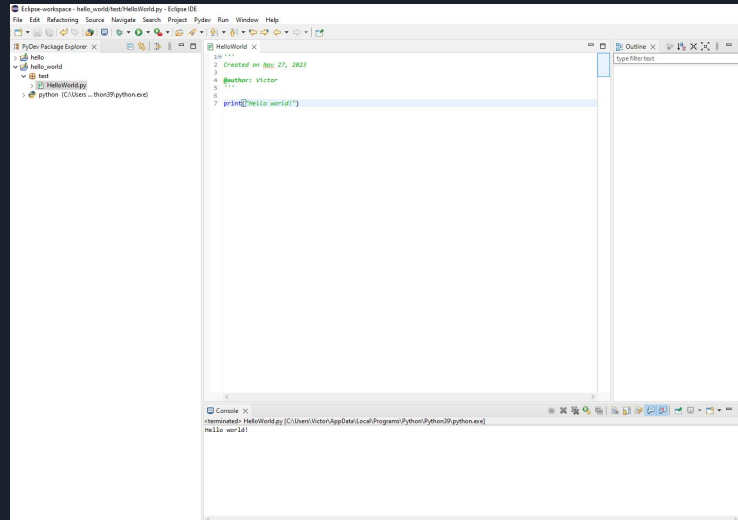# Assignment 2

Iacob Victor

Eclipse + PyDev

- First thing to is to assure that Python is installed
- By running 'python –version' in cmd, you can see if there is any version of python installed on the device you are working on
- Python 3.11 was installed for the first assignment, so the first step is completed
- After downloading Eclipse installer on my computer, I opened it and chose the option of 'Eclipse IDE for Java Developers'
- I ran the installation, chose an Eclipse workspace and then the program was ready
- In order to install pyDev, I went to Help section and chose 'Install new software…'
- A new popup was displayed on the screen…

- In the 'Work with' input I typed the following: http://pydev.org/updates
- I selected the first one as it can be seen in the picture above and clicked Next
- After the installation was finished, I closed the popup and went to Window section -> Preferences -> PyDev -> Interpreters -> Python Interpreter > New and selected the version of python installed on my machine

- Finally, I was able to build my first 'project' in which I printed out the classic Hello world sentence in order to check if everything works as expected and the result was positive

Advantages:

- When talking about advantages, it is available on all platforms, so it is good to use it when working on cross-platform development and also it is beneficial when working on large scale projects as it may offer more details than the other IDEs.
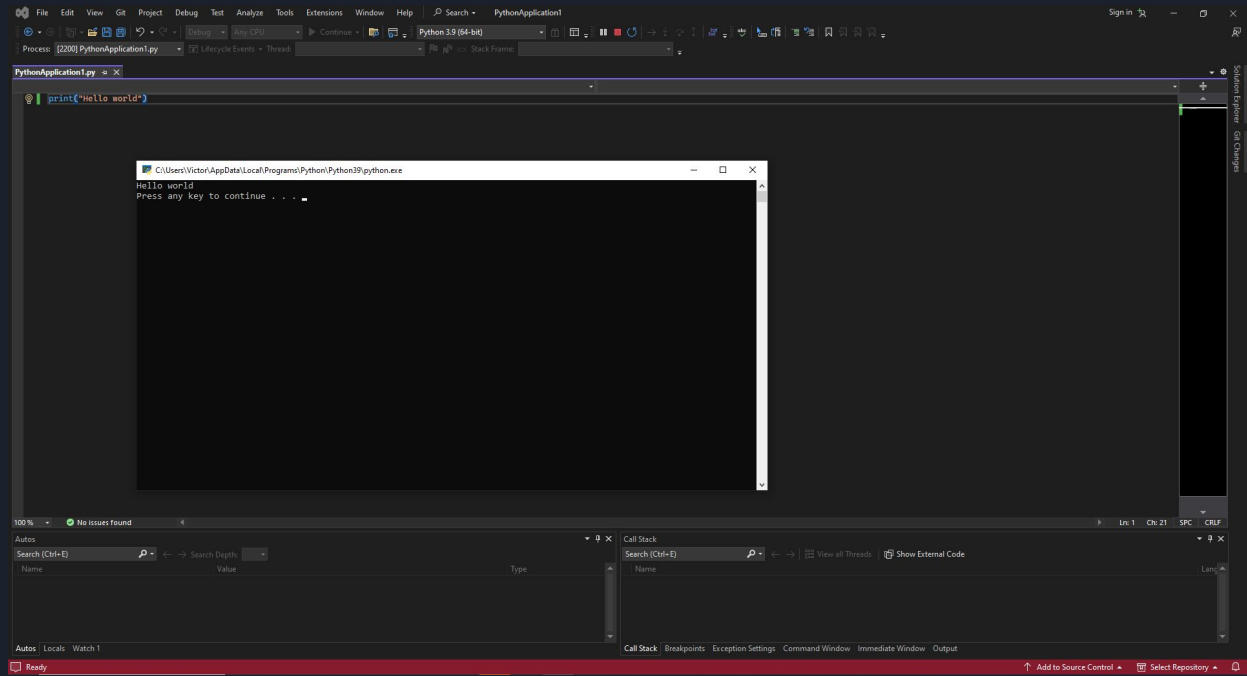
Disadvantages:

- In my opinion, a big disadvantage that Eclipse has is the fact that the configuration takes a lot of time and it seems to be really old fashioned (compared to Visual Studio or PyCharm).

- Also, there could be problems when working with plugins, since there are many things that the user should be aware of when installing them.

Visual Studio + Python Tools for VS

- The installation of Visual Studio was pretty straightforward, meaning that you should download the VS installer and then just select out what you want to install (in my case, I selected the Visual Studio Community 2022)
- After it was done successfully, I opened the program and on the home page I selected 'Continue without code'
- On tools tab, I selected Get tools and features
- From workload I selected Python development and from Individual components I searched for 'python' and selected Python 3 64-bit, then clicked on Install (Modify)
- After the installation was completed, I was able to create a new python project…

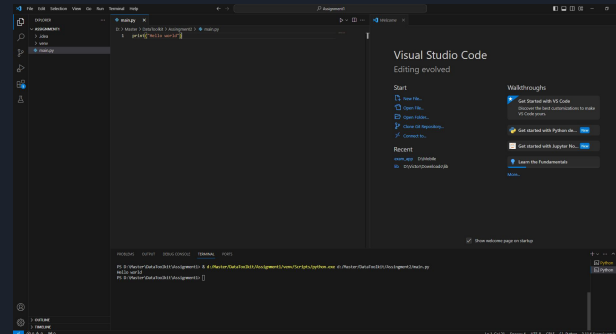The python interpreter worked just fine.

Advantages:

- On the other hand, it can be very useful on machines with larger disks and very powerful specifications as it has lots of optimized libraries for many programming languages.

- Also, Microsoft offers constant updates that keeps the IDE up to date which is a key factor when talking about editors.

Disadvantages:

- One thing about VS that can be seen as a disadvantage is that it occupies a considerable space on disk.

- Also, it can be really slow on less powerful machines, because it requires a lot of resources making it inefficient.

Visual Studio Code + Python tools

- Firstly, I downloaded the installation package for Visual Studio Code right from the Microsoft webpage: https://code.visualstudio.com/download
- I began the installation process
- After completing it successfully, I opened the program, created a new file named 'main.py'
- Down in the status bar I clicked onto interpreter and it automatically searched for the latest Python version installed on my device (3.11) and I selected it
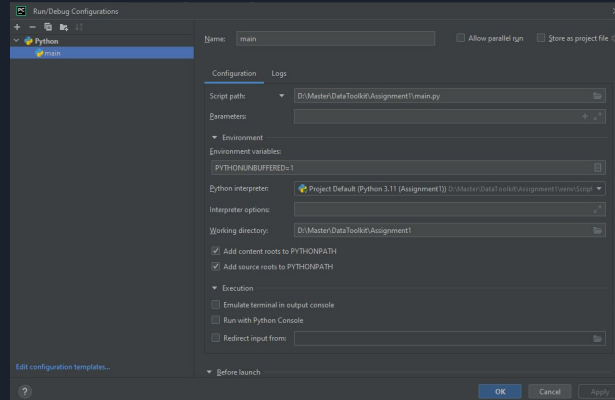- Next, I ran my program and the result was positive

Advantages:

- The advantage of Visual Studio Code is that its installation process and environment setup is very easy to do and it requires not more than 5 minutes to complete
- It also benefit of constant updates and there are a lot of tools and features ready to be used on different programming languages available worldwide
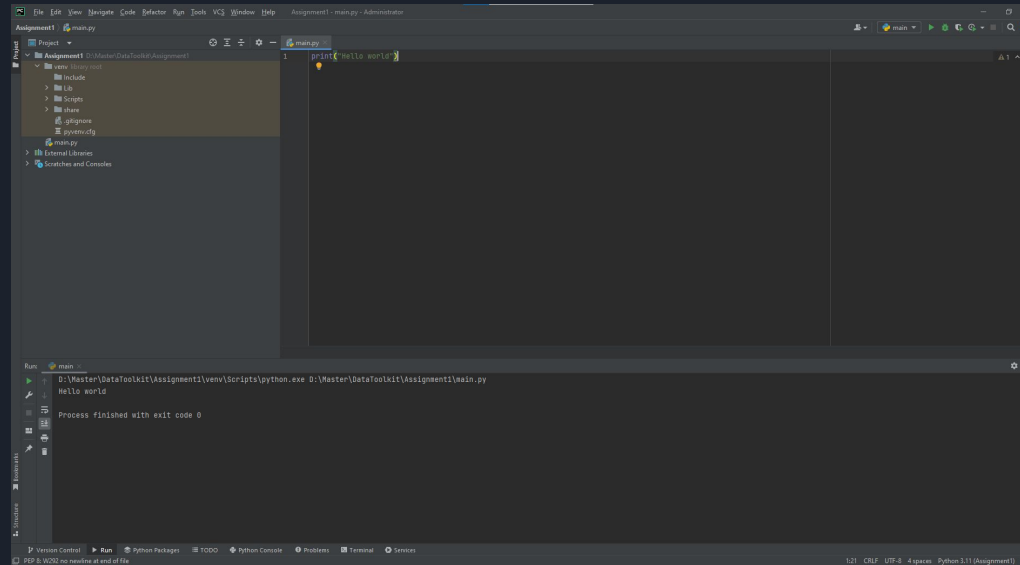- It is free to use

Disadvantages:

- It may become slow if there are lots of extensions installed and the projects are too large

PyCharm

- For PyCharm I logged into JetBrains website using my SCS mail from University
- I downloaded the installation package for PyCharm and ran it on my device
- The installation process went flawlessly
- Then, I opened the program and created a new project and completed the configuration, selecting Python 3.11 as the interpreter and assuring that the script path is the right one

- After that, I was able to ran my first python project and it worked successfully

Advantages:

- The biggest advantage that PyCharm has over its competitors is that it is built specifically for python usage. So, users can benefit of code completion, intelligent code analysis, debugging, testing, and integration with various Python frameworks.
- Also, on the right side of the screen database tools can be seen and they can be checked in real time, thing that can be very useful when debugging or writing methods that add/remove/update entries in the db
- Setups for projects are straightforward
- Constant updates from JetBrains

Disadvantages:

- The disadvantage is that the whole Professional package is pretty expensive for the basic learner/user.

Thank you!