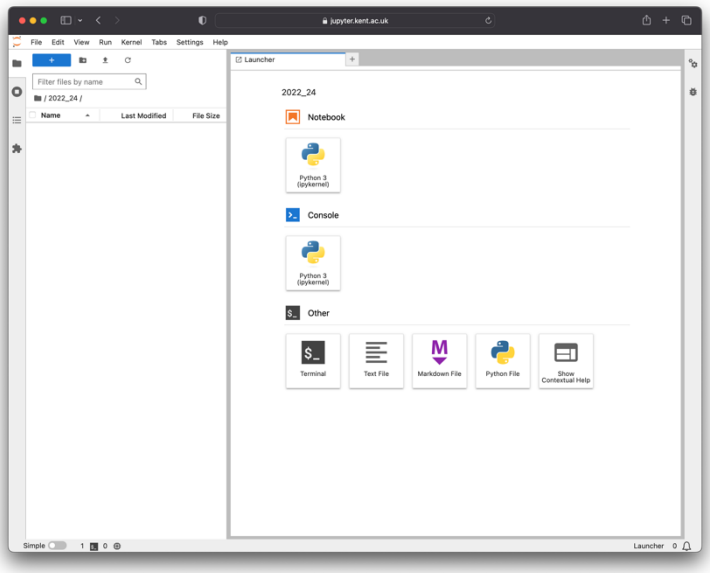
COMP8270
Programming for Artificial Intelligence

Class 1

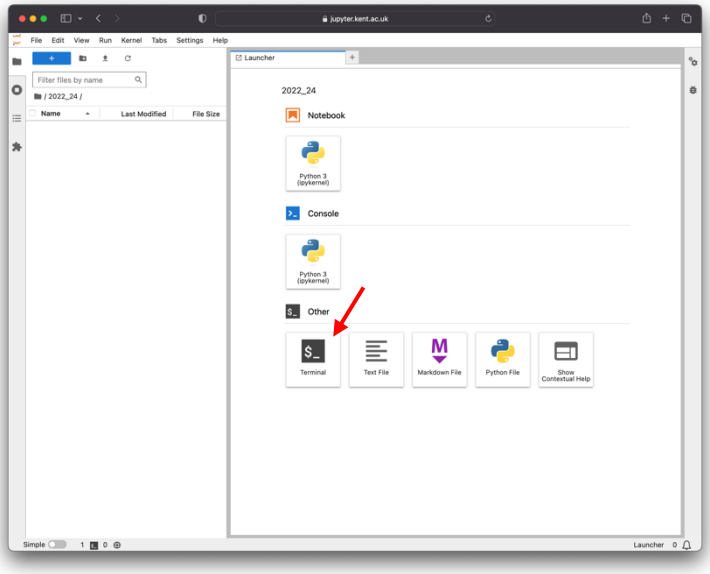
The aim of this class is to familiarise ourselves with the Jupyter environment and write python code in a Jupyter Notebook.

As a first step, you will need to log in into: https://jupyter.kent.ac.uk – this is the URL for the School of Computing Jupyter server. After you log in, you will see your 'Dashboard' section.

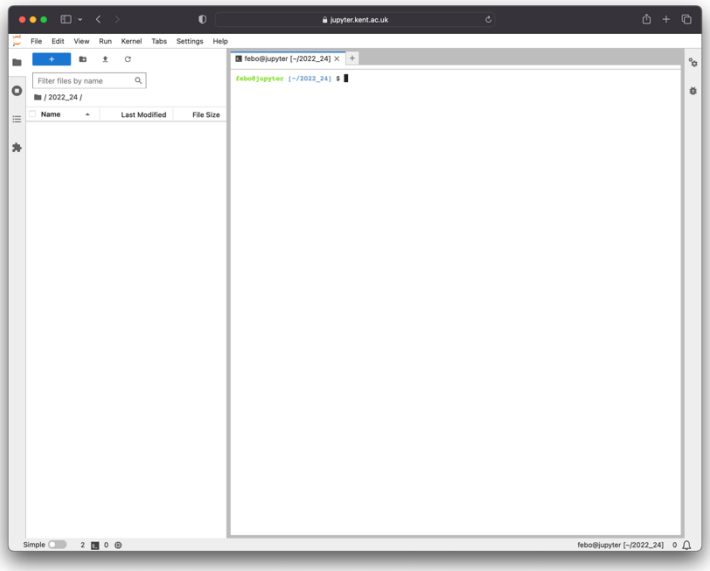


Task 1 – Setup the jupyter notebook guide

On the *Dashboard* page, click on New → Terminal:



This will open a terminal window on the server:



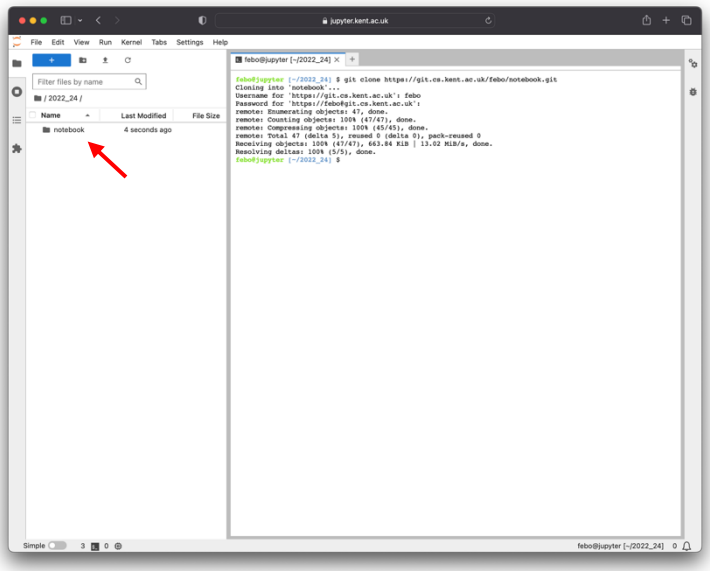
On the terminal, execute the following command:

```
$ git clone https://git.cs.kent.ac.uk/febo/notebook.git
```

You will need to enter your Kent login details. The execution of the command will generate an output similar to:

```
Cloning into 'notebook'...
Username for 'https://git.cs.kent.ac.uk': febo
Password for 'https://febo@git.cs.kent.ac.uk':
remote: Enumerating objects: 285, done.
remote: Counting objects: 100% (285/285), done.
remote: Compressing objects: 100% (247/247), done.
remote: Total 285 (delta 31), reused 285 (delta 31), pack-reused 0
Receiving objects: 100% (285/285), 5.76 MiB | 44.38 MiB/s, done.
Resolving deltas: 100% (31/31), done.
```

You can now close this tab and go back to the *Dashboard* page.



Click on the “notebook” folder and open the file (notebook) “index.ipynb.” From this point onwards, explore the information available on the provided links.

Writing Python code

1. The Fibonacci numbers form a sequence where each number is the sum of the two preceding ones:

   $F_0 = 0, F_1 = 1,$

   and

   $F_n = F_{n-1} + F_{n-2}$

   The Java code below prints the Fibonacci numbers smaller than 22. Your task is to create a Jupyter Notebook representing a Python version of the code.

```
public class Fibonacci {
    public static void main(String[] args) {
        int n1 = 0;
        int n2 = 1;

        System.out.println(n1);

        while (n2 < 22) {
            System.out.println(n2);
            int n3 = n1 + n2;
            n1 = n2;
            n2 = n3;
        }
    }
}
```

   Your task is to create a Jupyter Notebook and write a Python version of the code:

```
n1 = 0
n2 = 1

# prints the first to number
print(n1)

# prints the rest of the fibonacci number less than 22
while n2 < 22:
    print(n2)
    n1, n2 = n2, n1 + n2
```

   Don’t forget to add markdown explaining the purpose of the notebook that you just created.