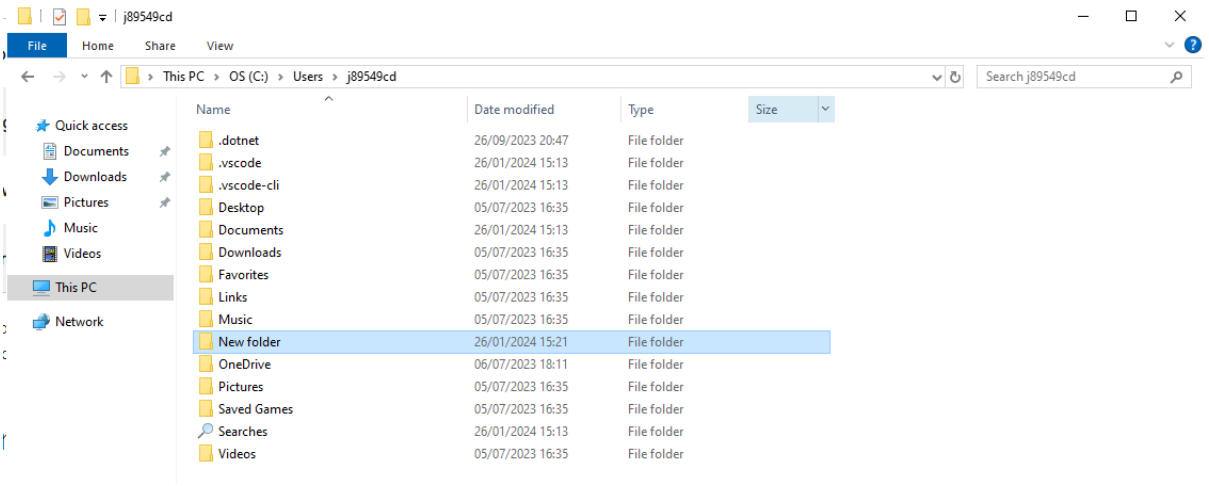
Instructions for use of VS Code / Git on the lab computers in Schuster 3.58

Important note: We have to use the C:/ drive with VS code due to issues with network drive permissions that don't play nice with git or with VS code compilation and running. Remember that nothing you save in the C:/ drive will be saved in your OneDrive, it will only be local to the computer you're using in the lab - and they get cleaned periodically. So after each lab session, you must save your work somewhere else in the network drive and re-copy it to the C:/ drive when you start working again. The easiest way to do this is to use version control (git) as explained below.

When you start a new project, you will have to :

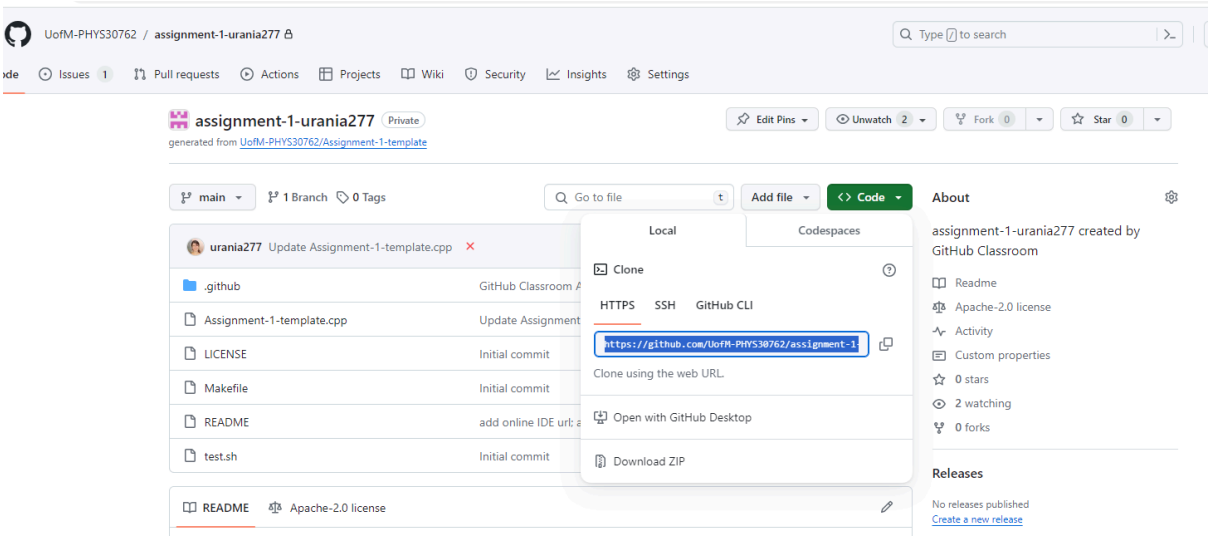
1) Make a new folder on the C:/ drive, in "Documents" (the path for a random user is shown below, you need to go from This PC -> C:/ otherwise you will end up on the network drive if you use the Quick Access link).



2) Open that folder from VS Code: from the menu, select File → Open Folder and search for the folder you just created. You will be asked to trust the author of that folder so you can run the code inside it (it's you, so say yes).

3) Open a new terminal in VS Code (Terminal → New terminal)

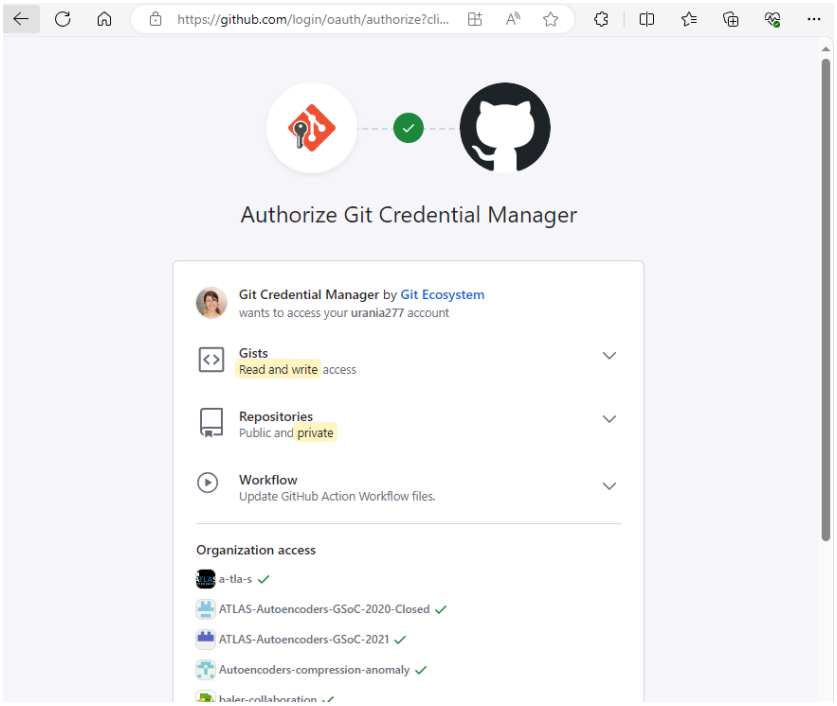
4) Prepare yourself to clone a repository from git - this will be the skeleton of the assignment with the repository that has been automatically created for you. In this case I will use a mock skeleton assignment at https://github.com/UofM-PHYS30762/assignment-1-urania277.git, your path will change as below, copy this path to the clipboard



5) Enter this in the terminal:

```
git clone [your path that you copied]
```

The first time you use git on a computer on the teaching cluster, it will ask you for your git username, and to authorise further access like this - enter your credentials, and click on the green button saying “authorise this”.

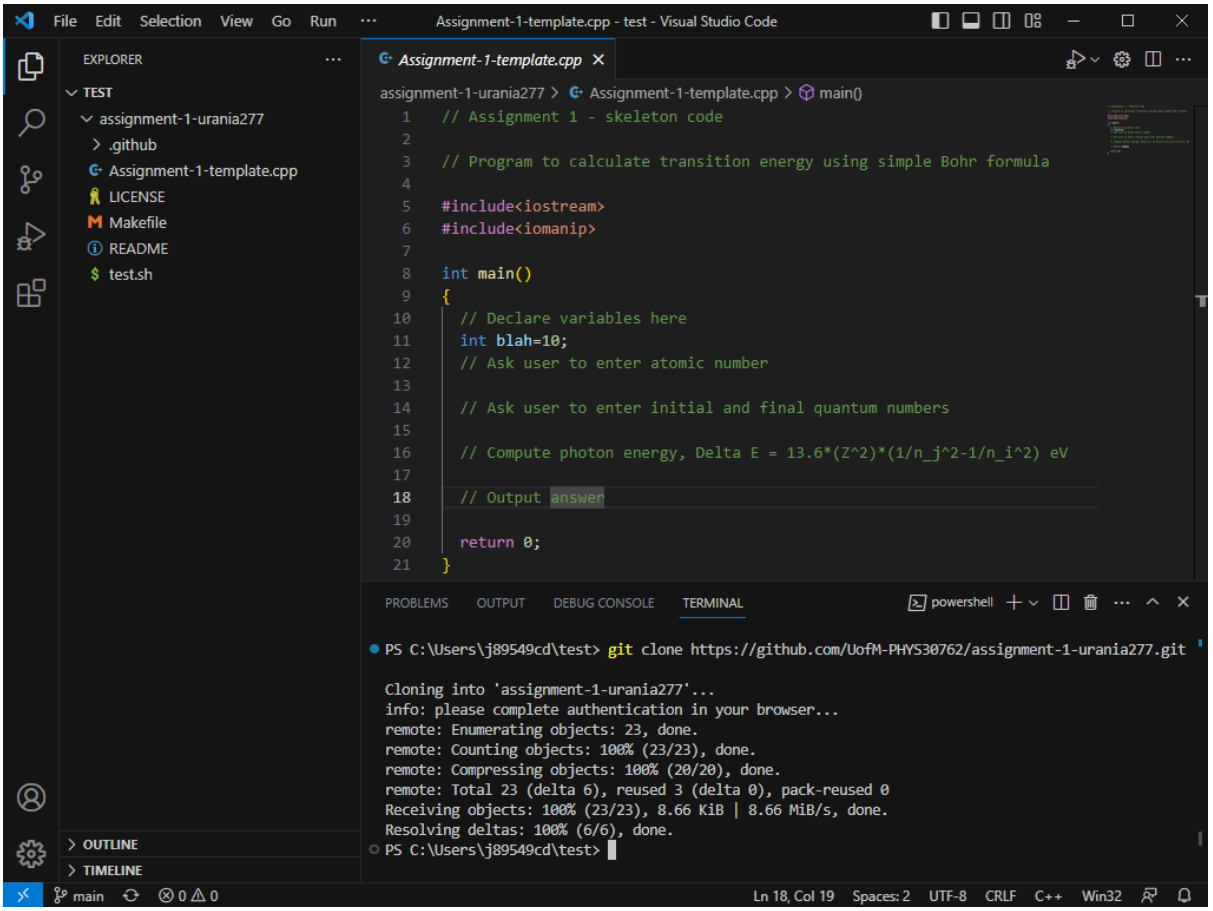


If all went well you should see this in the terminal:

```
PS C:\Users\j89549cd\test> git clone
https://github.com/UofM-PHYS30762/assignment-1-urania277.git
Cloning into 'assignment-1-urania277'...
```

```
info: please complete authentication in your browser...
remote: Enumerating objects: 23, done.
remote: Counting objects: 100% (23/23), done.
remote: Compressing objects: 100% (20/20), done.
remote: Total 23 (delta 6), reused 3 (delta 0), pack-reused 0
Receiving objects: 100% (23/23), 8.66 KiB | 8.66 MiB/s, done.
Resolving deltas: 100% (6/6), done.
PS C:\Users\j89549cd\test>
```

When you check the content of the test/ folder, you should see a sub-folder called “assignment-1-...” and inside that you will find the content of your repository.



6) To check that everything has gone well and that you’re ready to use version control like a professional C++ software developer, make a small change to the template file, and then commit it and push it to the repository like this (you have to cd to the “assignment-1-...” folder first). The commands are in bold Courier font, the output is in regular Courier font.

PS C:\Users\j89549cd\test\assignment-1-urania277> ls

```
    Directory: C:\Users\j89549cd\test\assignment-1-urania277
```

```
----                 -------------         ------ ----
d-----        26/01/2024     15:46                .github
-a----        26/01/2024     15:51            418
Assignment-1-template.cpp
-a----        26/01/2024     15:46          11558 LICENSE
-a----        26/01/2024     15:46            114 Makefile
-a----        26/01/2024     15:46            680 README
-a----        26/01/2024     15:46            495 test.sh
```

PS C:\Users\j89549cd\test\assignment-1-urania277> git add .\Assignment-1-template.cpp
PS C:\Users\j89549cd\test\assignment-1-urania277> git commit -m "Meaningful commit message"

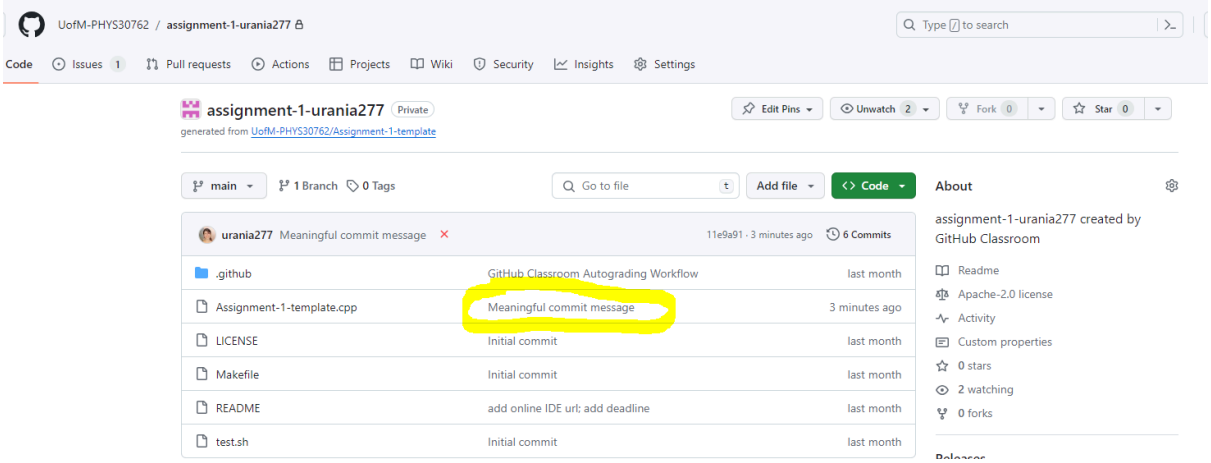
(Note: you can ignore the message below, or do what it says)

```
[main 11e9a91] Meaningful commit message
 Committer: Caterina Doglioni <caterina.doglioni@manchester.ac.uk>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are
accurate.
following command and follow the instructions in your editor to
edit
your configuration file:

    git config --global --edit

After doing this, you may fix the identity used for this commit
with:

    git commit --amend --reset-author

 1 file changed, 1 insertion(+), 1 deletion(-)
```

PS C:\Users\j89549cd\test\assignment-1-urania277> git push

```
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 308 bytes | 308.00 KiB/s, done.
Total 3 (delta 2), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (2/2), completed with 2 local
objects.
To https://github.com/UofM-PHYS30762/assignment-1-urania277.git
   b25262d..11e9a91  main -> main
PS C:\Users\j89549cd\test\assignment-1-urania277>
```

7) At this point, you can go to your repository and you should see your change - everything has worked!



8) The next time you want to work on this project, be it on the computing cluster or on your local laptop, you just need to clone the repository as in step 5 and you will pick up the changes you've committed. This is much more convenient than copying things across on a pen drive or sending them over via email, isn't it?