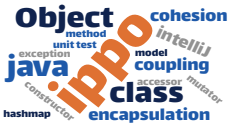
Submitting coursework using Git

ippo 2021-2022



Create a GitHub Account (you can skip this if you already have one)

- Go to https://github.com/join[1]
- You can use any username and email, but using your UUN and university email address helps associate you with your account.
- Choose a strong, but memorable password. Forgetting this can lead to late submission!
- Click on "Create Account".
- You will receive an email with instructions to verify your email address.

Accept your first assignment

- Log into your GitHub account at https://github.com/login[2]
- The following link allows you to join: https://classroom.github.com/a/LJ118oO-[3]
- If this is your first time using GitHub Classroom, you will have to click on "Authorize GitHub".
- You should now be presented with a list of student identifiers (UUNs). It is very important that you click on YOUR identifier and confirm your choice by clicking "OK". If you select a wrong UUN or your UUN is not in the list, please email dsymons@exseed.ed.ac.uk stating your GitHub username, your UUN and (if applicable) the UUN you mistakenly selected.
- Click "Accept this assignment" and wait for your repository to be created.
- Once completed, you will be shown the URL of your repository for the assignment. You can now use this to upload/submit your work. See instructions below and on under LEARN » Resources.

Accepting future assignments (this is only for assignment 2)

- You will be sent an invitation link as soon as the next assignment becomes available. Clicking on this link will take you to GitHub Classroom.
- Click "Accept this assignment" and wait for your repository to be created.
- Once completed, you will be shown the URL of your repository for this assignment.

Ways of using Git

- GitHub offers a web interface through which you can add, remove and edit files in your repository. This is OK for very small projects.
- You are strongly encouraged to use the command line for your assignments.
  See LEARN » Resources » DevelopmentTools.pdf for installation instructions or go to https://git-scm.com/downloads[4].
- You may also want to try a graphical user interface, such as GitHub Desktop[5].

[1] https://github.com/join
[2] https://github.com/login
[3] https://classroom.github.com/a/LJ118oO-
[4] https://git-scm.com/downloads
[5] https://desktop.github.com/

Initial upload:

- Version control is designed to prevent you losing your work, but if you are new to Git make a backup of your work before experimenting with commands.
- You will need your username and password to authenticate when using the command line. However, a recent change requires you to genreate an access token. See here[6] for instructions.
- Open a terminal and navigate into your (IntelliJ) project folder, where your "src" folder is located.
- Initialise the repository and mark your files for upload.

```
➔ git init
➔ git add -A
➔ git commit -m "Initial commit"
```

- Specify the repository you set up in previous steps, by giving its URL.
  This should be of the form: https://github.com/UoE-IPPO/assignment1-USERNAME.git

```
➔ git remote add origin <PROJECT_URL>
```

- Upload your files.

```
➔ git push origin master --force
```

- Specify a default branch.

```
➔ git branch -u origin/master master
```

- Once everything is set up, some basic commands should be sufficient to update your repository.

Overview of basic Git terminal commands:

- Command "git add": Associate files with the project. Note that this is not going to upload them!
  - Type "git add $\langle fileName \rangle$", where you explicitly name the file you want to add.
  - Type "git add -A" to upload the entire contents of your current directly (-A means "ALL").
  - Note that only files that were added can be committed (see below)!
- Command "git commit"
  - Use this command to mark files for upload to your GitHub repository on the next "push".
  - Type: "git commit -m 'MESSAGE'", where the message should describe the changes made.
  - If you don't leave a message using -m it assumes you want to type a multi-line message and enters a mode in which you can type it. To save your message and exit hit Esc, then type wq (to save) and then hit enter.
- Command "git push": Uploads committed changes to your online repository.
- Command "git pull": Download files from your GitHub repository.
- Command "git": Lists all available commands.

[1] More information can be found here[7] and under LEARN » Resources » Git.

[6] https://docs.github.com/en/authentication/keeping-your-account-and-data-secure/creating-a-personal-access-token

[7] https://docs.github.com/en/github/using-git/using-common-git-commands

Remember to commit and push your changes to the repository as you are working on the assignment - don't wait until you think it is absolutely "correct", or "finished". At the assignment deadline, we will pull your code directly from the repository for marking.