

# Git instructions

## Problem ID: a05p01gitinstructions

During the design of your algorithm and your implementation, you should use git. Beginners often make mistakes that can be a mess to recover from when initiating repositories locally, so it is simplest to start with Github, and let it take care of initializing the repo for you:

Create an account on [github.com](https://github.com).

Create a private repository on Github, following the instructions that appear on Github:

- Pick a name for the repo, for example `Assignment 5`.
- Make the repo private.
- Check the box for making a README file.
- Check the box for making a `.gitignore` file. Select the python template (you can type `py` in the search field).
- You do not really need to protect this homework with a license, so skip that for now.
- Click “Create repository”.

Once you’ve created the repo, you should see a green button near the top, labelled “Code”. Click it, and copy the URL for HTTPS, not SSH. Open a terminal. For Windows, we recommend git bash.

Navigate to a folder where you want to store the repo on your computer, then `git clone url-to-repository`.

Note: If you are having trouble accessing the correct drive, open the folder in the GUI, right click, and click “Git Bash Here”.

If/When you are prompted to log in, you can use a Personal Access Token as the password:

- Go to GitHub.
- Click on your profile image in the top-right corner and click settings.
- Under `Developer Settings`, bottom left, click `Personal access tokens (classic)`.
- Create a new token. Give it a descriptive name that tells you what you are using the token for, for example “My laptop” or “For Programming Class”, so that months later you won’t have to wonder if it is safe to delete or not.
- Make sure to check the checkbox for `repo`, which will also check all the subselections.
- Set the expiry date after the course is done. 90 days should be enough.
- Scroll all the way down, and click `Generate token`.
- Store the generated token somewhere safe. If you lose this token you can never reclaim it (although if you do, you can revoke it and generate a new one).
- Use this token as your password.

Note: If this does not work, make sure you have the latest version of git installed and try again.

`cd` into the folder git creates for you and open this folder in VSCode.

- Write the description of your algorithm as a comment in a file called `max_int.py`.
- Inspect the result of `git status`.
- Use “`git add .`” to move changes to the staging area.
- Commit your changes with `git commit -m "Describe the algorithm"`.
- Then start implementing your algorithm.
- During your implementation, make sure you do `git status`, `git add`, and `git commit` regularly. Take care to write good commit messages, in English, that describe what the change involves. Use imperative mood in commit messages. For example, “Fix bug”, and not “Fixed bug” or “Fixes bug”.

- You can see a log of all your commits with `git log`. Hit the `q` key to escape the log interface.
- When you have finished your implementation:
  - Push your changes to the remote repo with `git push`.
  - Inspect your commits on Github.