Working with Github – quick start guide

Introduction

Github is a website which facilitates group working on software development projects. For the purposes of this course it can be used:

(1) For the course tutor to provide you with sample files, and
(2) For you to save your own files from the virtual machines, so that you can access them later.

To get files from Github to your virtual machine, or to put files onto Github we use a source code management application called git. This application is pre-installed on your virtual machine but can be downloaded and installed on your personal computer from **https://git-scm.com/**

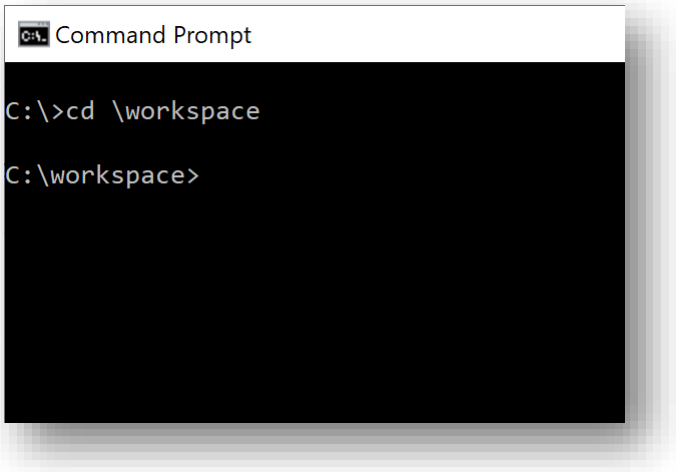
In Github we work with repositories – a repository is a complete set of files (which could be 1 or more projects).

1 – preparing your computer

We suggest that you create a folder called workspace at the top level of the C drive, and put all the files from your course tutor, or that you create, under this folder.

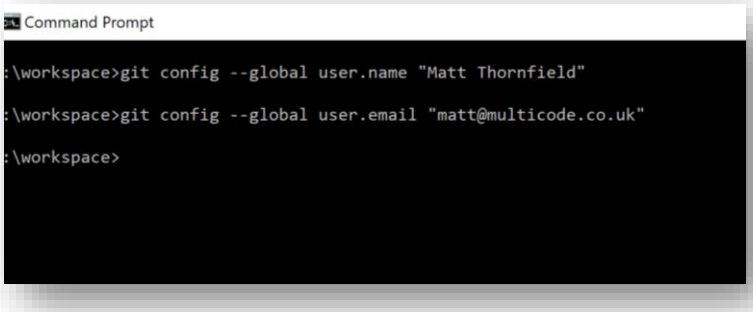
The easiest way to use git is to open a command prompt (click on the search icon, type in `cmd` and press enter).

To navigate to this folder in a command prompt, enter the command: `cd \workspace` and press enter.



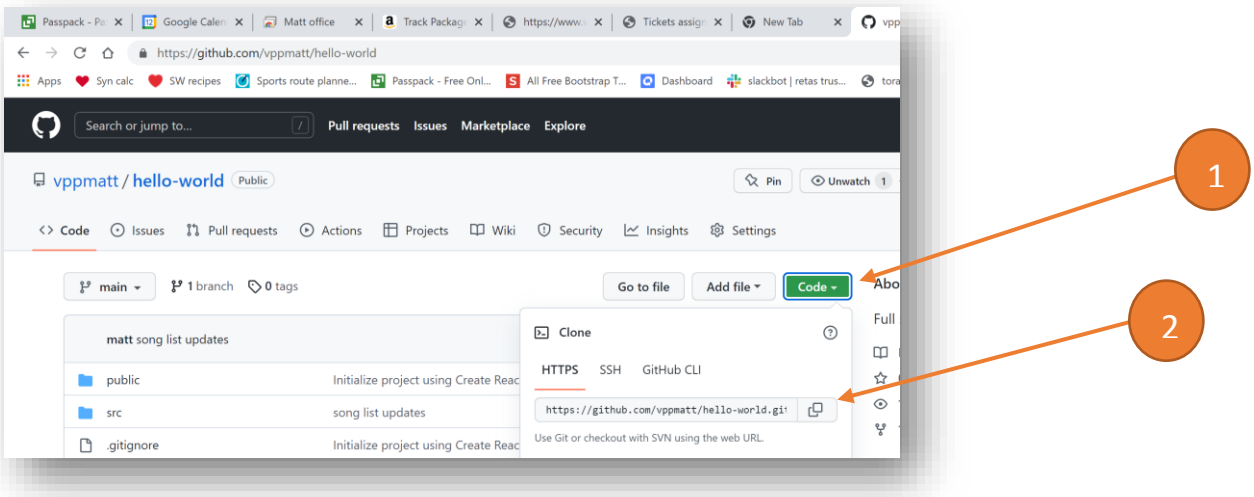
Before you use git for the first time, you should configure it by entering the following 2 commands. (Replace the section in quotes with your own details

```
git config --global user.name "your name"
git config --global user.email "your email"
```



2 – Copy files to your computer

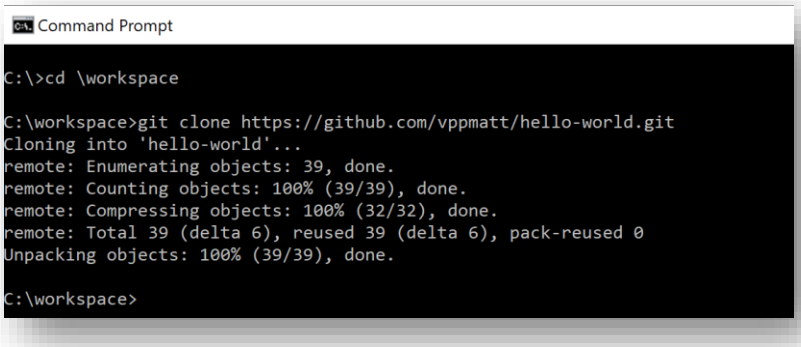
To copy files from Github onto your computer, start by visiting the Github web page for the repository, click on the green code button, and then click on the copy icon in the box which appears, to copy the git URL.



Then on your computer, in the command prompt, navigate to the workspace folder and enter the command

```
git clone <<paste here the url you copied>>
```

and press enter. To paste into a windows command prompt, just press the right mouse button.



If the course tutor updates the files and you wish to update your local copy, ensure you are in the folder for the relevant project, and enter the command:

```
git pull.
```

3 – Using a github account

If you wish to put your own files onto Github (which you will need to do If you want to save your files from the virtual machine to access later), you will need an account on the github.com website. If you already have an account, you can use this. Alternatively, your course tutor may provide you with an account you can use, or you can create a free account on the github.com website yourself.

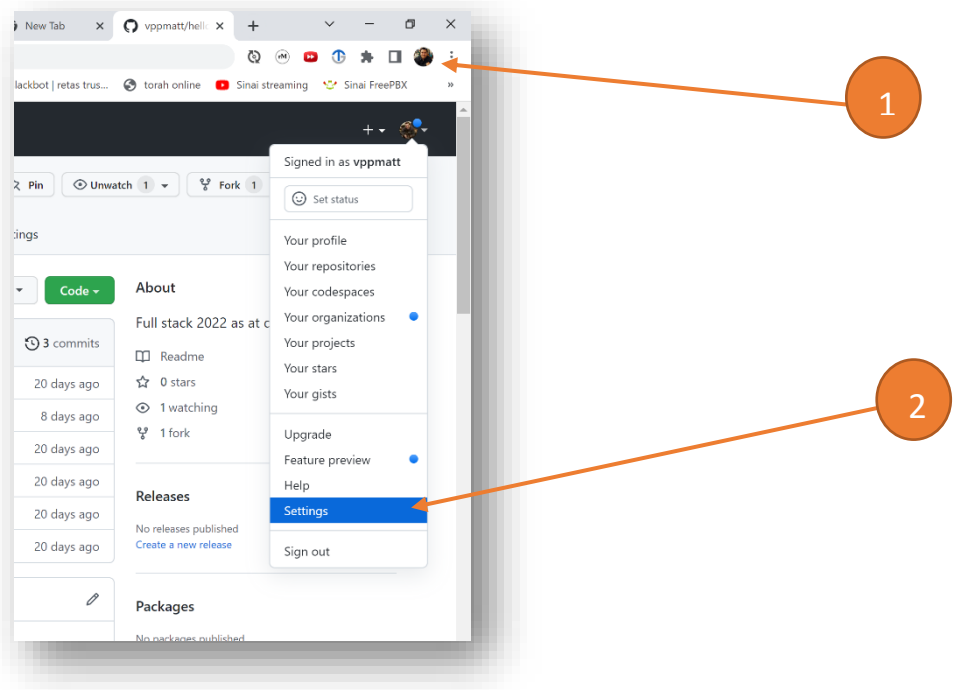
It is strongly recommended that you sign into your Github account using a browser on the virtual machine.

4 – Get a personal access token

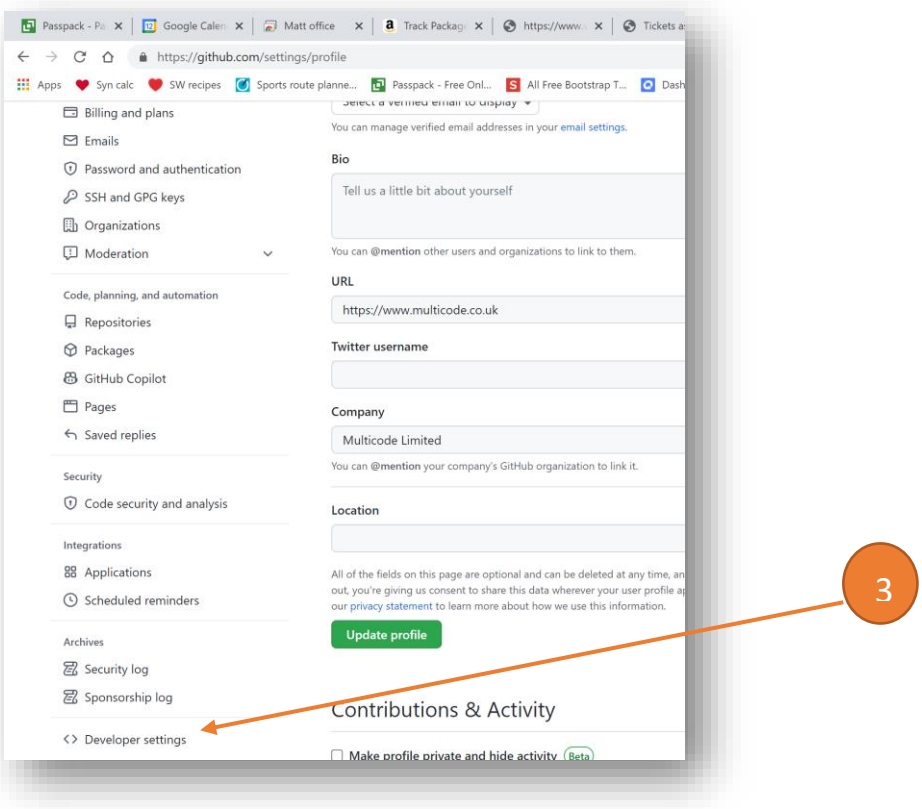
Once you have access to an account on Github.com and you are signed into the account on your browser, you will need to create a personal access token. You will use this instead of a password to copy files from your computer to your Github account.

To create the token:

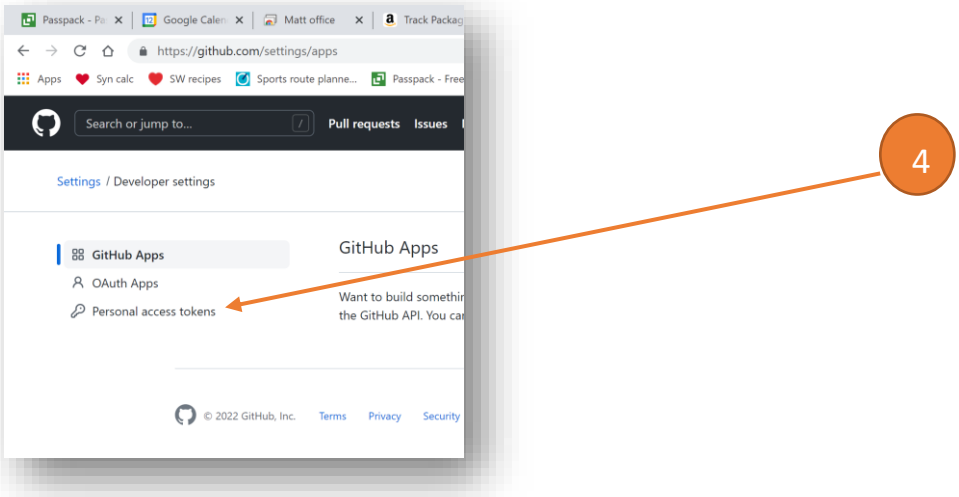
Visit the Github website, and click on the profile icon at the top right of the page. Then choose “Settings” from the dropdown menu.



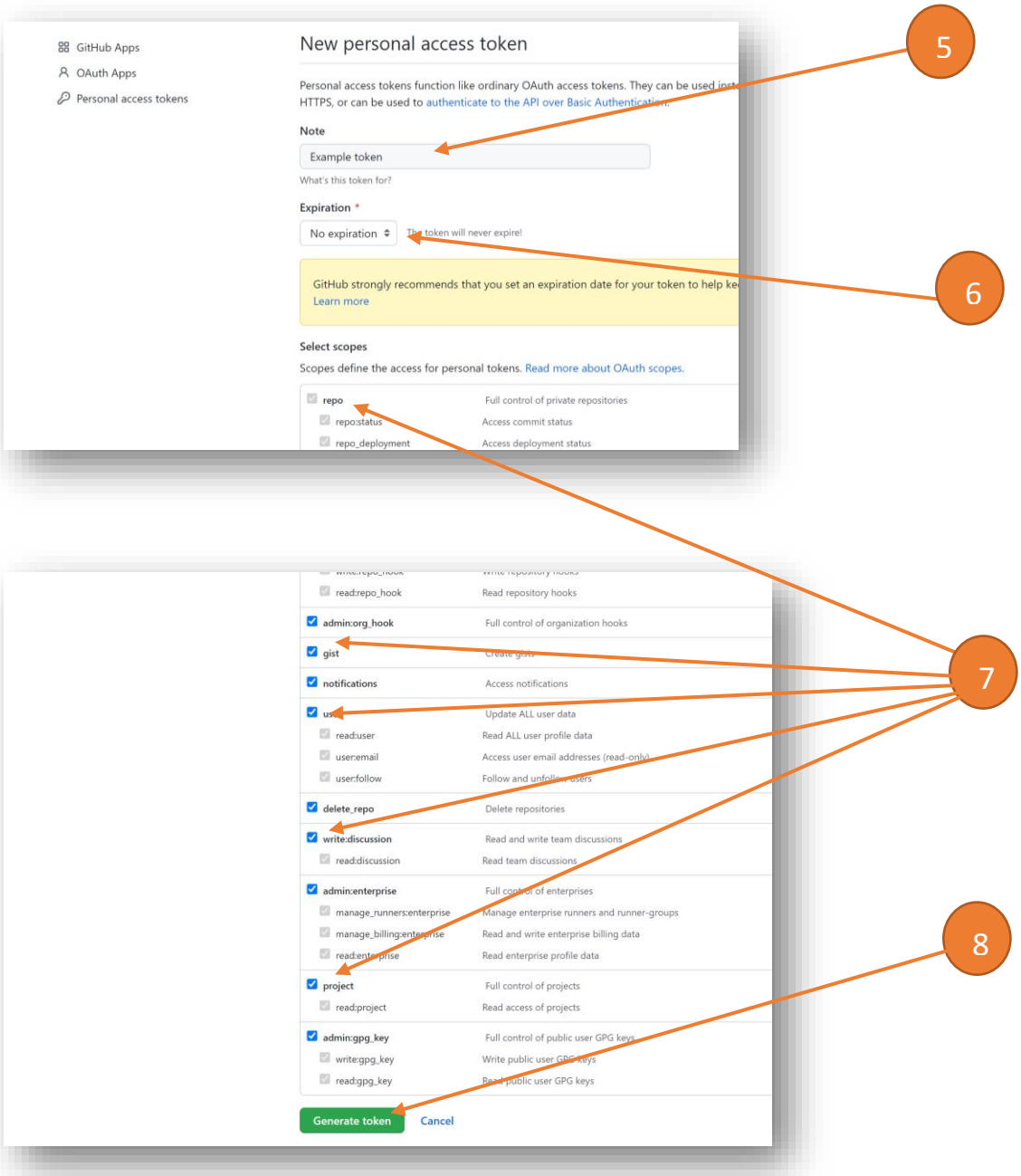
Scroll down the page and on the left hand side click on “Developer settings”



Now click on “Personal access tokens”

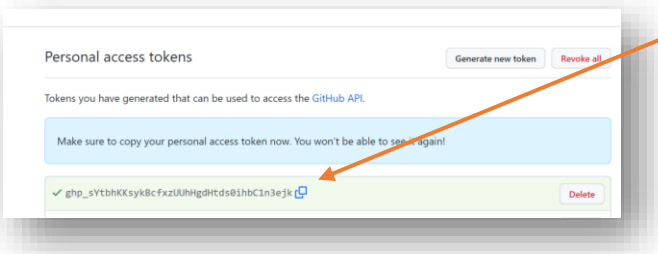


Click on the “generate new token” button. On the next screen, give the token a name. We suggest you choose “no expiration” from the dropdown box. Then tick EVERY top level box before clicking on the green “Generate Token” button.



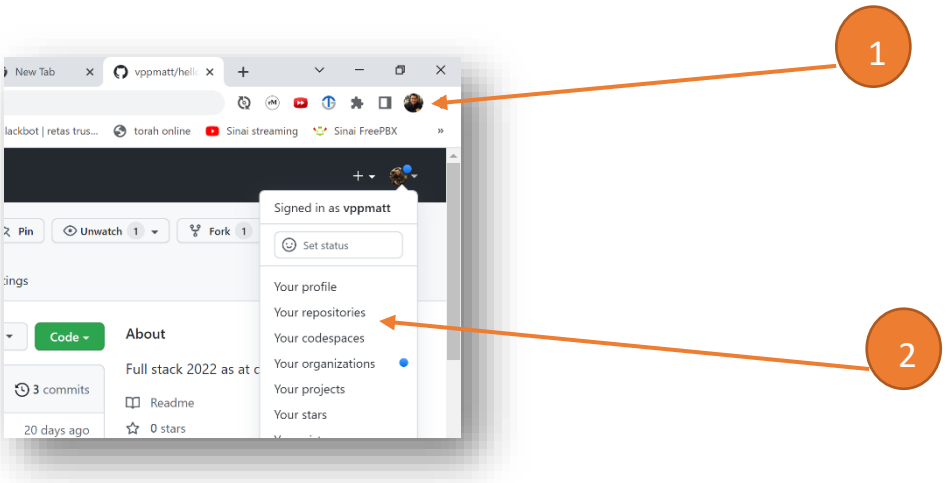
On the next page, you will be shown your token – you must copy this token (click on the copy icon) and save it somewhere (such as in a notepad file on the desktop of the virtual machine).

If you lose the token, you will need to create a new one to replace it.

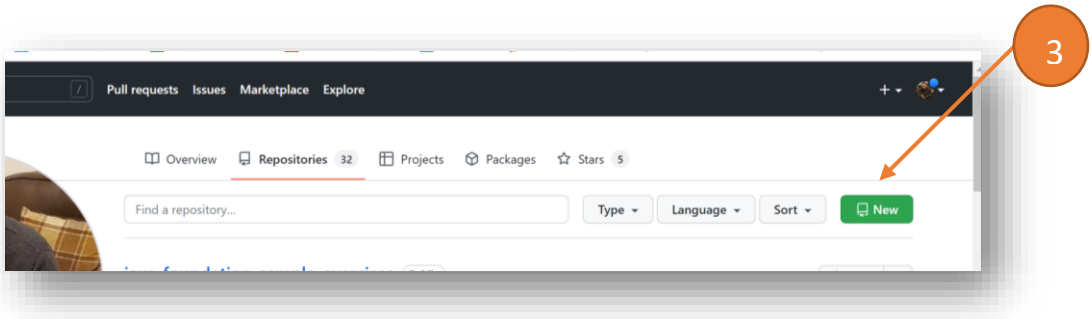


5 – Create a Github repository

For each project that you wish to copy to Github you first need to create a repository. Go to the repositories page (click on the profile link and then repositories)

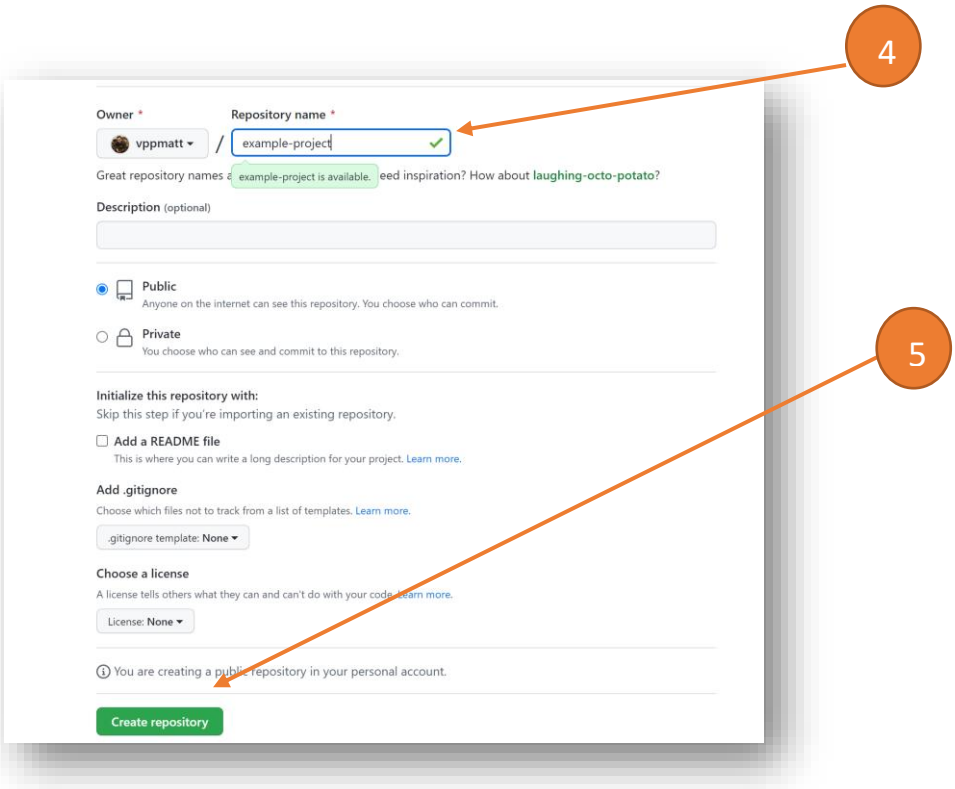


Click on the green New button



Give the repository a name – don't put any spaces in the name. This name should ideally match the folder name for the project on your computer (it doesn't have to match but it is better if it does!)

Then click on the green "create repository" button



IMPORTANT - DO NOT NAVIGATE AWAY FROM THE NEXT PAGE!

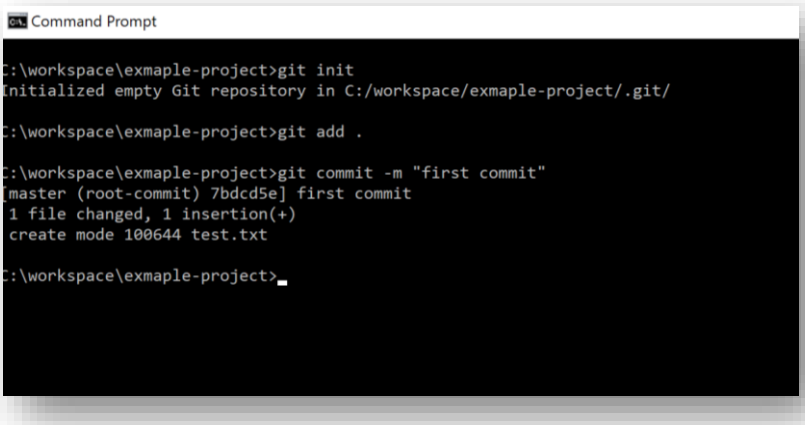
6 – Create a local git repository

The next step is to make your code into a git repository. Within your project folder, enter the following commands to create the local git repository and put all your files into it

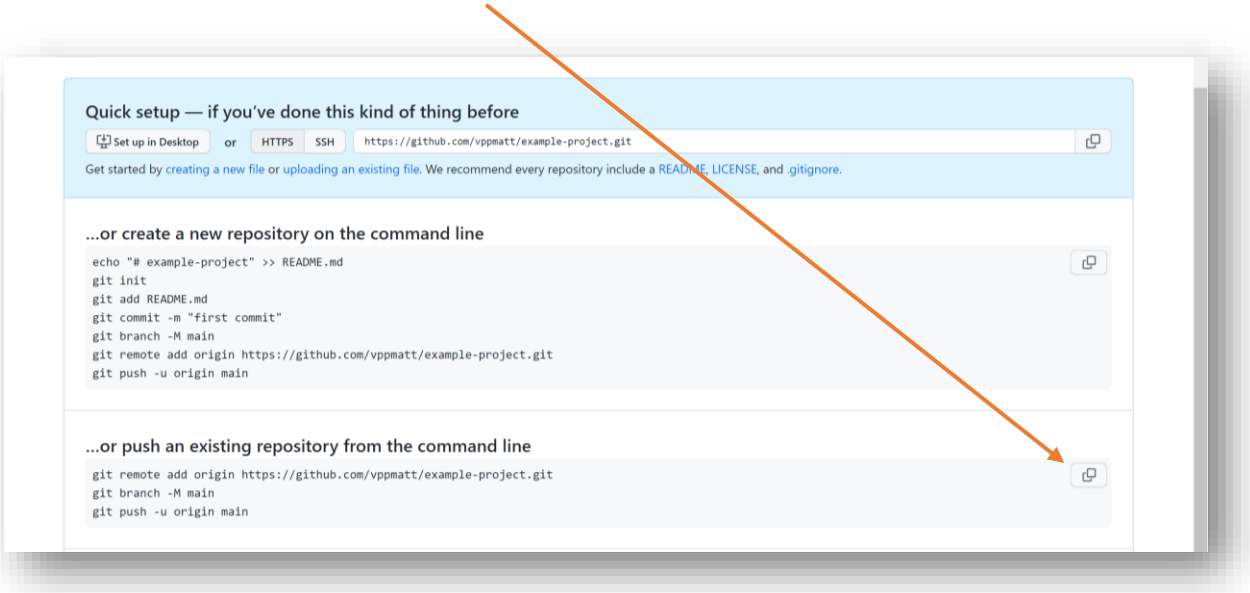
```
git init
```

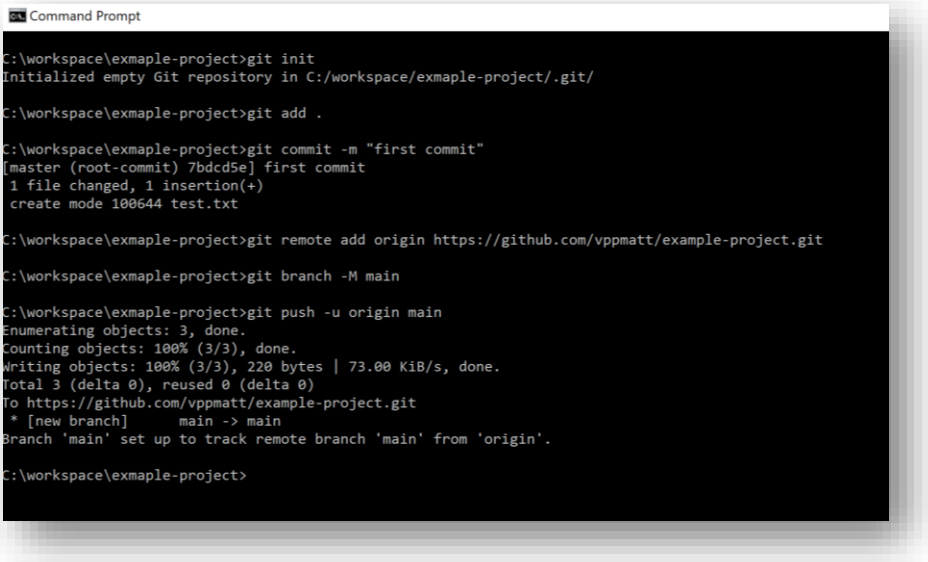
```
git add .
```

```
git commit -m "first commit"
```



Now copy the middle section from the Github website, and paste this into the command prompt.





The first time that you do this, you will be asked for your username and password. This will appear in a pop up window. DO NOT ENTER YOUR DETAILS HERE – just click on the cancel button to close that window.

You will then be asked to enter your username and password in the command prompt.

Enter your github username, but instead of the password, enter the developer access token. Remember that you can right click to paste in the command prompt. Note that as the token is a password, it will not appear on screen when you paste it.

7 – Store your token

A hidden folder will have been created called .git, and within this folder is a file called CONFIG. Open this file in a text editor such as notepad.

Contained within this file is the URL to your repository. Edit this line, inserting your Github username and the token you copied so that it is in the following format:

`https://username@token:github.com/...`

8 – Synchronize your changes

As you make changes to your code, you can synchronize these with the Github website by entering the following commands

```
git add .
```

```
git commit -m "some message"
```

```
git push
```