Cloning

Contents

Overview

`git clone` allows the cloning of a repository to a newly created directory. The `git clone` command also sets up remote
tracking of branches for the ones in the repository and checks out the initial branch (which becomes the current active branch, usually this would be the branch called **main**/**master**).

Once the clone is created locally, `git fetch` can be executed (without additional arguments), to get updates for the remote
branches.

Similarly, a `git pull`, without arguments, would merge the remote branch into the current branch.

> This lets us keep our local branch up to date with changes on the remote

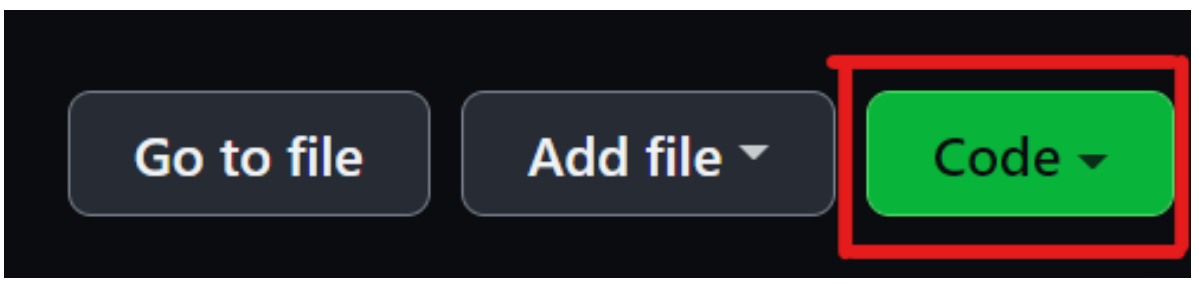
Cloning a Repository

In order to clone a repository, there are a couple of things you need to do first:

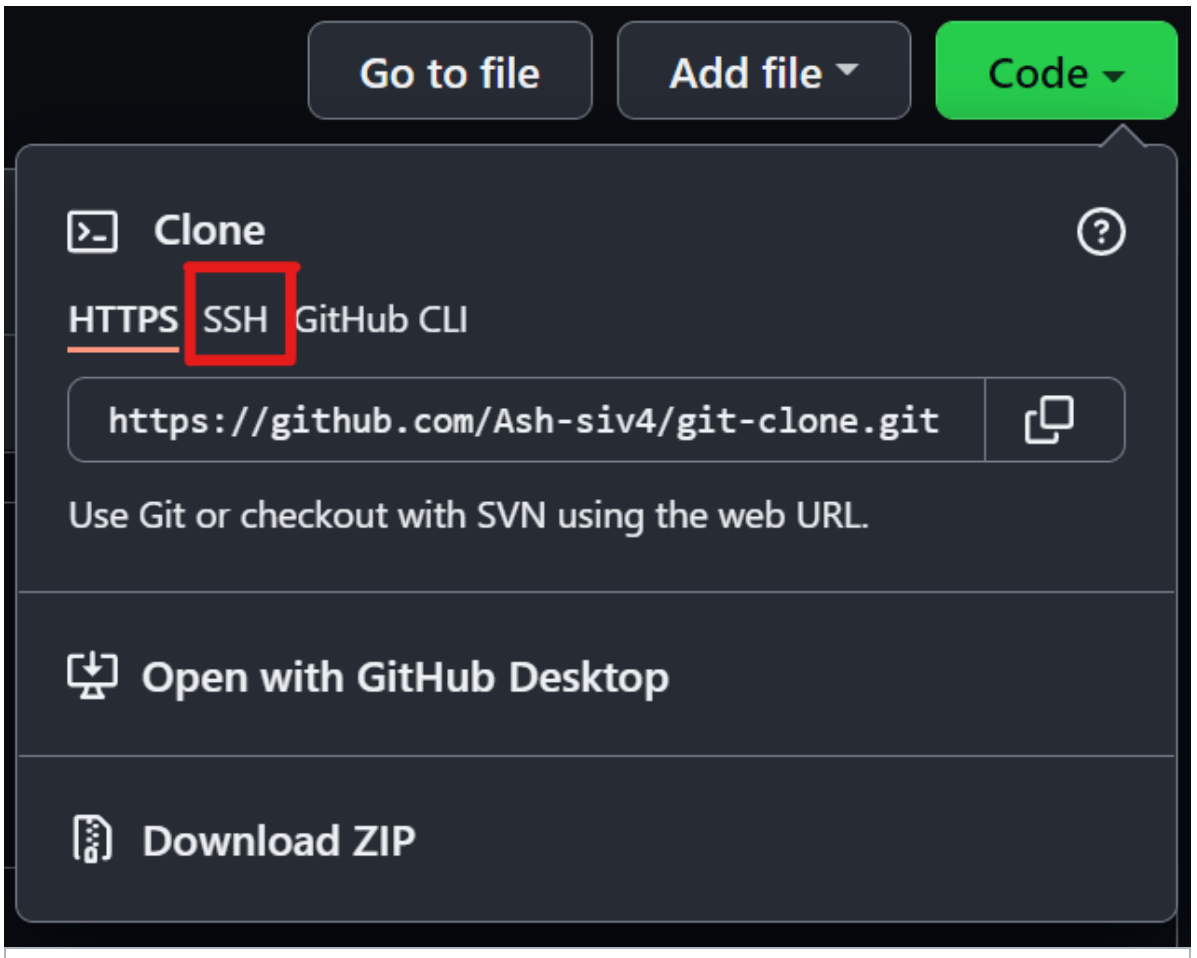
- Install Git on your machine
  > Refer to the **"GitHub and Git Bash"** module if you have not downloaded `Git Bash` already
- Find the URL of the repository you want to clone

To get the URL of the repository you want to clone, you need to go to that repository in the VCS (Version Control System) you are using, such as: GitHub.

1. If your VCS is GitHub, you can find the URL to clone a repository by clicking on the green `Code` button within the repository you wish to clone.



2. When you click on the green `Code` button, you should see the following:




```
GitHub provides three types of URL's to copy in order to clone down a
repository and they are:
- HTTPS
- SSH
- GitHub CLI
```

> IMPORTANT: We will be using `SSH` URL's to clone down repositories.

3. Select the `SSH` tab on the pop-up and **copy** the URL.

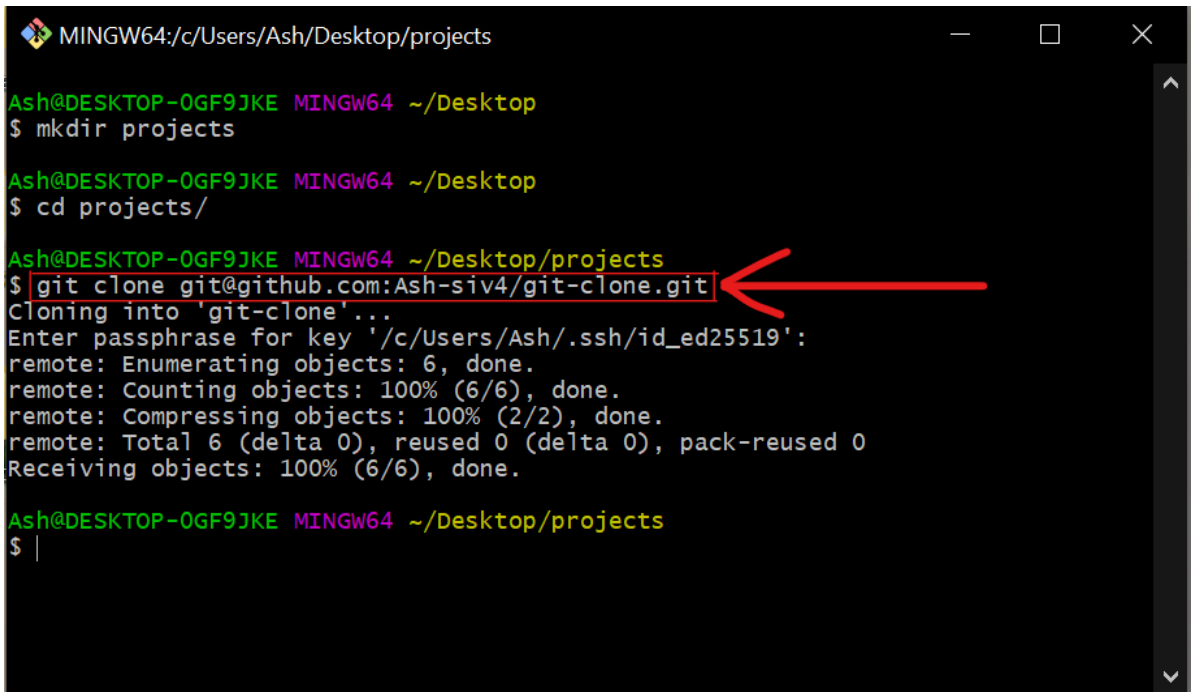
   The `SSH` URL should be in the format of:

   ```
   git@github.com:[username]/[repository_name].git
   ```

   ▶ Expand for an example

4. Open Git Bash and navigate to the directory where you want to save the cloned repository. You can create a new directory and give it a name (i.e: *projects*), or navigate to an existing directory.

   In the example below, a new directory has been created and the remote repository has been cloned into it:

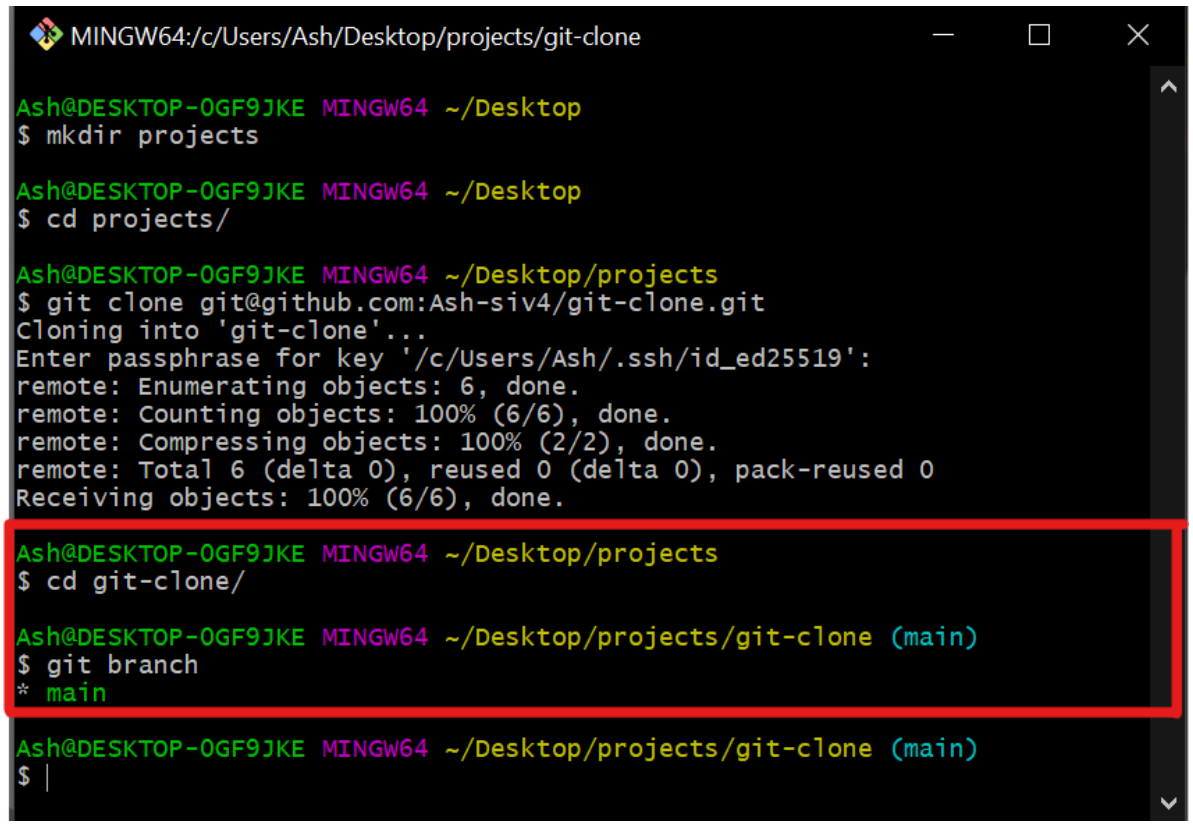


   As the image above shows, the Git command to clone a remote repository using the `SSH` URL is:

   ```
   git clone git@github.com:[username]/[repository_name].git
   ```

5. Once the repository has been cloned locally, change to the project directory (`cd` into the local copy of the repository) and run `git branch` to check that the active branch has been checked out.

For example:



Tutorial

Cloning a Repository

- Create a new repository
  - Initialise the repository with a README.md file
- Clone the repository to the desired location
- Check that an active branch has been checked out

Exercises

There are no exercises for this module.