ARENA

Git Basics

Contents

01 Introduction

This lesson covers the common Git commands used for managing and uploading projects on GitHub. These commands present the basic Git workflow, as they are to be used 70-80% of the time.

02 Learning Outcomes

By the end of this lesson, you should be able to describe how-to

- copy an existing repository from GitHub onto your local machine and explain the two-stage system that Git uses to save files.
- upload the project work to GitHub by using Git.
- check the status of your files and view commit history.

03 Assignment

Watch this video by Corey Schafer for a great overview of some basic Git commands.

04 Cheat sheet

This is a reference list of the most commonly used Git commands. (Consider bookmarking this handy page.) Get familiar with the commands to be able to memorize them long term.

Commands related to a remote repository:

```
git clone https://github.com/user-name/repository-name.git
git push origin main
```

Commands related to workflow:

```
git add .
git commit -m "A message describing what you have done"
```

Commands related to checking status or log history

```
git status
git log
```

The basic Git syntax is program | action | destination. Examples:

`git add .` is read `git | add | .` (period represents everything in the current directory);
`git commit -m "message"` is read as `git | commit -m | "message"`;
`git status` is read as `git | status | (no destination)`.

05 Conclusion

It is normal not to feel completely comfortable with GitHub straightaway. The more one uses it, the more comfortable one gets.

06 Additional Resources

This section contains helpful links to other content. It isn't a mandatory resource page, but to be considered as a supplement reference list.

- With SSH keys, you can connect to GitHub without supplying your username and personal access token at each visit. Learn more about SSH here, and how to generate new SSH keys.
- Learn Enough Git to Be Dangerous is an introductory guide on Git by Michael Hartl. An easy-to-read, pragmatic guide to using Git is available for free on Kindle.
- The Git Cheat Sheet from GitHub provides quick instructions for using common commands (you can find a webpage version here).
- Atlassian has a very thorough and well laid out Git tutorial.
- This video by Jeff Delaney has a fast-paced overview of Git.
- For a more in-depth understanding of Git, read the free ProGit eBook.

07 Knowledge Check

This section contains questions for you to check your understanding of this lesson. If you're having trouble answering the questions below on your own, clicking the small arrow to the left of the question will reveal the answers.

1. What is the Git command used to get a full copy of an existing Git repository from GitHub? 2. What is the Git command used to check the status of your files?
2. What is the Git command used to track files with Git?
3. What is the Git command used to commit files?
4. What is the Git command used to view your commit history?
5. What is the Git command used to upload projects into GitHub?
6. Explain the two-stage system that Git uses to save files.
7. Explain what `origin` is in `git push origin main`.
8. Explain what `main` is in `git push origin main`.