SE Bootcamp

Hyperiondev

Version Control
Git Basics & GitHub

WELCOME TO THE VERSION CONTROL TASK

Your Lecturer for This Session

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Objectives

This task will introduce version control; Git and GitHub.

What is a Version Control System?

- A database that records modifications to a file or set of files so that you can recall specific versions later on.

  A Version Control System (VCS) is able to look at old and new versions and show you how they differ.

- Version Control (VC) is independent of the kind of project, technology or framework you are working with.

- It is also indifferent to the tools you work with (e.g. text editor, graphics program, file manager, etc.).

Why do you Need a Version Control System?

- Collaboration: When working on a large (or even medium-sized) project, more often than not, you will find yourself working as part of a team of developers. Therefore, you will have multiple people who need to work on the same file. Without a Version Control System in place, you will probably have to work together in a shared folder on the same set of files. It is therefore extremely difficult to know when someone is currently working on a file and, sooner or later, someone will probably overwrite someone else's changes.
- By using a Version Control System, everybody on the team is able to work on any file at any time. The Version Control System then allows you to merge your changes into a common version, so the latest version of the project is stored in a common, central place.

Why do you Need a Version Control System?

- Storing versions: It is especially important to save a version of your project after making any modifications or changes. This can become quite confusing and tedious if you do not have a Version Control System in place. A Version Control System acknowledges that there is only one project being worked on, therefore, there is only one version on the disk you are currently working on. All previous versions are neatly stored inside the Version Control System. When you need to look at a previous version, you can request it at any time.

Why do you Need a Version Control System?

- Restoring previous versions: Being able to restore older versions of a file enables you to easily fix any mistakes you might have made. Should you wish to undo any changes, you can simply restore your project to a previous version.

- Backup: A Version Control System can also act as a backup. Every member of the team has a complete version of the project on their disk. This includes the project's complete history. If your central server breaks down and your backup drive fails, you can recover your project by simply using a team member's local repositories.

Why do you Need a Version Control System?

- Understanding what happened: Your Version Control System requires you to provide a short description of the changes you have made every time you decide to save a new version of the project. It also allows you to see exactly what was changed in a file's content. This helps you understand the modifications that were made in each version of the project, even if you weren't the one who made them.

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Q & A Section

Please use this time to ask any questions relating to the topic, should you have any.

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Thank You for Joining Us