

Using git for code sharing

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What is git?

- A version control system (VCS)
- Free and open source
- Developed in 2005 by the creator of Linux Linus Torvalds
- The most widely used VCS for software development and source code management



What git is not

- A workflow management tool*
- A project management tool
- **Most importantly it is not GitHub**



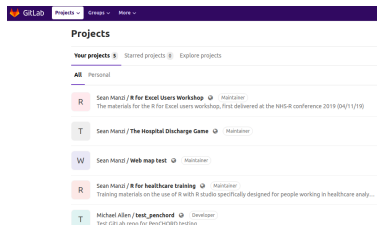
git platforms

- GitHub
- GitLab
- BitBucket
- SourceForge
- Many more but these are the most popular



What are git platforms for?

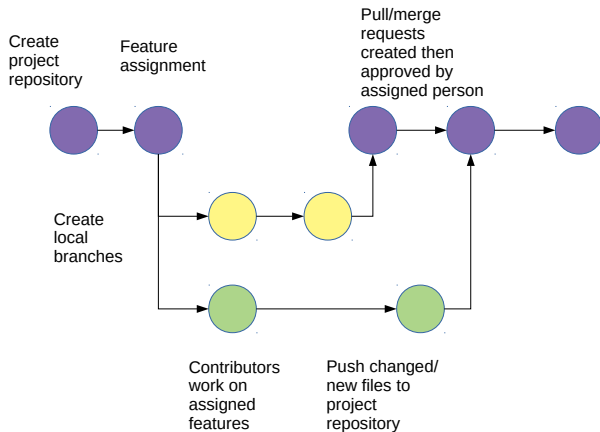
- Hosting code (and other documents) to make it freely available to anyone
- As part of the workflow for software and program development projects
- As an online portfolio of your work



How to use git

- Install git on your computer
- Register with a git platform
- Determine project management and workflow structure
- Project manager sets up the project repository on the git platform
- Tasks are allocated by the project manager to project contributors
- Contributors pull the git repository cloning it to create a local version
- Contributors create a local branch of the repository and work on that
- When the contributor is ready to upload their changes they push them to the online repository
- The contributor creates a pull/merge request
- An assigned person checks the pull/merge request and actions it
- The changes are then merged
- git merges files based on file content within a branch not based on specific file names

Feature branching workflow

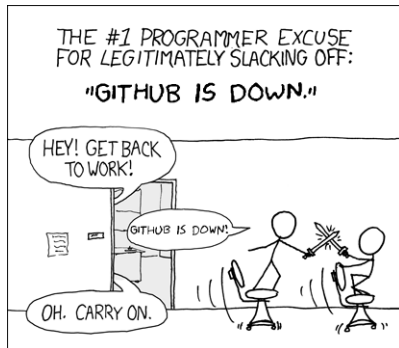


git workflow golden rule

only one person should be working on
a file at any given time

The importance of git

- Helps to organise a complex and convoluted process of people making multiple changes at the same time
- Well established code management platform, tracking changes and enabling reversion to previous versions
- Git is an industry standard, it is powerful, secure and flexible
- Git is simple to use...but...there are many ways to use it
- At the very least it is a great way to share code for others to use



Useful resources

- [Git reference guide](#) Useful and relatively simple cheat sheet
- www.atlassian.com/git Tutorials and articles on the use of Git
- dangitgit.com Useful tips on getting yourself out of difficult situations
- rogerdudler.github.io/git-guide A 'simple' guide to getting started with Git

Thank you

Check out www.rforhealthcare.org for a variety of materials to help you to get started with R