Git Workshop

by Laura Żuchowska 👋

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What's Git even?

How does git work?

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Hashes and trees

- generally bases (almost) everything on hashes
- has a tree-like structure
- every developer has a local copy on their machine
- you can change your local history
- can’t handle big binary files

Branches

git log --all --decorate --oneline --graph 🤷

```
| | |/
| | * aa65ac5 (origin/prefect_extract_data) ▯  Added ability to automatic change date_range if flows have failed in t
e last days
| | * 0d681bf ▯  Added class arguments and code to run() method
| | * 9ea987a ▯  Added PrefectExtract task to SupermetricsToADLS
| | * 8202644 ▯  Added new task for Prefect
| |_|/
|/| |
* | |   e37e4fa Merge pull request #261 from dyvenia/create_dirs_in_to_csv
|\ \ \
| * | | 5ebabc4 (origin/create_dirs_in_to_csv) ▯  Removed unnecessary bits
| * | | b256777 ▯ `df_to_csv` now creates dirs if they don't exist
| / / /
* | |   c4512b8 Merge pull request #256 from dyvenia/fix_utils_docstring
|\ \ \
| * | | d679697 ▯  Fixed utlis docstring
|/ / /
* | |   2af7b64 Merge pull request #255 from dyvenia/pin_prefect
|\ \ \
| * | | 260a609 (origin/pin_prefect) ▯  Added entry on Prefect version pinning
| * | | 232ddd2 ▯  Pinned Prefect version
|/ / /
| | | * 21fcd8f (angelika233/kv_c4c_angelika, kv_c4c_angelika) ▯  Fixed kv c4c when credentials are None
| | | * e838407 ▯  Removed unnecessary code
| | | * e08d23b (0r) ▯ Added key vault support c4c
| | | | * befcfb1 (origin/dependabot/pip/mkdocs-material-8.1.10) Bump mkdocs-material from 8.0.1 to 8.1.10
```

SSH

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ssh-keygen -t rsa -b 4096 -C "tag-of-your-ssh"

1. Create an SSH key
2. Save it to a file
3. Write passphrase
4. ssh-add -K /path/to/your/file
5. Add SSH on git

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Basics

Basic commands

add

git add [file/directory]

Stage files for commit.

Good practice:
Don't use *git add .*

commit

git commit -m [message]

Commit changes with message.

push

git push [from] [to]

Push changes to a branch.

pull

git pull [to] [from]

Pull changes from a branch.

Basic commands

rebase

git rebase [branch]

Update branch based on changes made.

Use if you're the contributor on official repo.

merge

git merge [branch]

Update branch based on changes made.

Use if you're working on a forked repo.

checkout

git checkout [branch]

Change branch.

Add -b to create a new branch.

Add -d to delete a branch.

status

git status

Show current list of files with changes.

Useful commands

stash

git stash show - show latest stash
git stash list - show list of stashes
git stash - save changes into stash (removes from workspace!)
git stash apply/pop - apply stashed changes (pop removes from stash list)

fetch

git fetch [to][branch] - saves a remote work in your local repo (without making actual changes, so you have to git checkout)

restore

git restore [file] - reverse the changes made on a file

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Pull Request how-to

Never push to main

Closed lzuchowska wants to merge 1 commit into `main` from `improve_flow_of_flows_list_handling`

Don’t be like this gal

Keep it simple

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One PR should implement one functionality

Don't try to push as much as possible - if you notice a bug, have an idea for a new component get a sudden urge to write a test for something not directly connected to what you're working on - leave it for next PR. Open an issue about it.

Keep the amount of commits per PR as low as possible. Reading through 100 commits is not the most pleasurable thing to do. But so is reading one commit with 20.000 lines of code. It's all about the balance in the universe.

Naming conventions

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:emoji: Verb + functionality

Always begin with a gitmoji (VSCode extension, each emoji specifies a function).

Use verbs such as “Added” or “Fixed”, capitalized.

Specify the functionality, try to keep it short.

If you get lost - naming conventions are usually written down in the documentation.

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COMMENT
DATE
CREATED MAIN LOOP & TIMING CONTROL
14 HOURS AGO
ENABLED CONFIG FILE PARSING
9 HOURS AGO
MISC BUGFIXES
5 HOURS AGO
CODE ADDITIONS/EDITS
4 HOURS AGO
MORE CODE
4 HOURS AGO
HERE HAVE CODE
4 HOURS AGO
AAAAAAAA
3 HOURS AGO
ADKFJSLKDFJSDKLFJ
3 HOURS AGO
MY HANDS ARE TYPING WORDS
2 HOURS AGO
HAAAAAAAAANDS
2 HOURS AGO
AS A PROJECT DRAGS ON, MY GIT COMMIT MESSAGES GET LESS AND LESS INFORMATIVE.

Examples

Bad

- Fixed a bug
- 💩 Added a test for *my-thing*
- anna_commit
- ✨ Added the possibility to parse a letter from a non-latin alphabet - a mandarin Chinese symbol for ‘data’, I’ve discovered those by reading a book once mentioned from my father whom...

Better

- 🐛 Fixed a bug in *name* for empty df
- ✅ Added a test for my thing
- 🎨 Updated code structure for *name*
- ✨ Added the possibility to parse a letter from a non-latin alphabet

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PRACTISE TIME

Thanks!

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