

# Basic Tools for NLP




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In case of fire



1.  git commit
2.  git push
3.  exit building

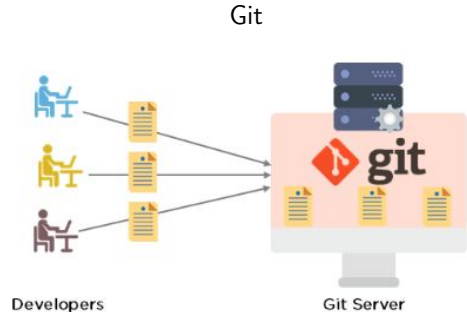
Git > Your life

## Git

- ▶ Type `git version` in your terminal
- ▶ Does it work?

## Git

- ▶ Tool for your code project management
- ▶ Used to tracking changes, enabling multiple developers to work together on non-linear development



## Initiating a git instance

- ▶ Create a repo `mkdir test`
- ▶ `cd test`
- ▶ Initialize a git instance `git init`
- ▶ `git status`
- ▶ `echo '1111' >> my_credit_card.txt`
- ▶ `git status`

```
yuliazaitova@Ulias-MBP-2 ~/Desktop/work/basic-tools/test % git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    my_credit_card.txt

nothing added to commit but untracked files present (use "git add" to track)
yuliazaitova@Ulias-MBP-2 ~/Desktop/work/basic-tools/test %
```



- ▶ `git add my_credit_card.txt`
- ▶ `git status`

```
yuliazaitova@Ulias-MBP-2 ~/Desktop/work/basic-tools/test % git status  
On branch master
```

```
No commits yet
```

```
Changes to be committed:
```

```
(use "git rm --cached <file>..." to unstage)
```

```
    new file:   my_credit_card.txt
```

```
yuliazaitova@Ulias-MBP-2 ~/Desktop/work/basic-tools/test % █
```

- ▶ `touch my_password.txt`
- ▶ `git status`
- ▶ `git add .` or `git add *`

## Git commit

- ▶ `git commit`
- ▶ `git commit -m 'Add credit card <name>'`
- ▶ `git status`

```
yuliazaitova@Ulias-MBP-2 ~/Desktop/work/basic-tools/test % git status
On branch master
nothing to commit, working tree clean
```

- ▶ But what about CVV?

## Amend commit

- ▶ `echo '222' >> cvv.txt`
- ▶ `git log`
- ▶ `git add .`
- ▶ `git commit --amend -m 'Add credit card <name>'`
- ▶ `git log`





## Comparing changes

- ▶ `echo '321' >> cvv.txt`
- ▶ `git diff`

```
yuliazaitova@Ulias-MBP-2 ~/Desktop/work/basic-tools/test % git diff
diff --git a/pass.txt b/pass.txt
index e69de29..b37e70a 100644
--- a/pass.txt
+++ b/pass.txt
@@ -0,0 +1 @@
+this is a diff example
yuliazaitova@Ulias-MBP-2 ~/Desktop/work/basic-tools/test %
```

- ▶ `git diff HEAD <file>`

## Git diff commits

- ▶ `echo '321' >> cvv.txt`
- ▶ `git log`
- ▶ `git diff <commit> <commit>` (can put any input)

```
yuliazaitova@Ulias-MBP-2 ~/Desktop/work/basic-tools/test % git log
commit 9fdda94798274ce232198dae4157e0026d71e40a (HEAD -> master)
Author: izaitova <izaitova@lsv.uni-saarland.de>
Date: Thu May 25 12:50:26 2023 +0200
```

2nd

```
commit 8b59b1c3f835b25c6d04d0a3ee5b0b756b6012bf
Author: izaitova <izaitova@lsv.uni-saarland.de>
Date: Thu May 25 12:50:14 2023 +0200
```

1st

```
yuliazaitova@Ulias-MBP-2 ~/Desktop/work/basic-tools/test % git diff 8b59b1c3f835
b25c6d04d0a3ee5b0b756b6012bf 9fdda94798274ce232198dae4157e0026d71e40a
```

## Git stash

Temporarily shelves (or stashes) changes you've made to your working copy so you can work on something else

- ▶ `touch diary.txt`
- ▶ `git stash`
- ▶ `touch notebook.txt`
- ▶ `git stash drop`
- ▶ `touch book.txt`
- ▶ `git stash pop` Diary is back!

## **.gitignore**

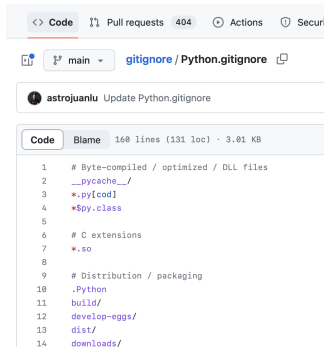
Files in git:

- ▶ tracked - a file which has been previously staged or committed;
- ▶ untracked - a file which has not been staged or committed; or
- ▶ ignored - a file which Git has been explicitly told to ignore.

## What can we ignore?

- ▶ hidden system files, such as `.DS_Store` or `Thumbs.db`
- ▶ large data files (more than 50MB)<sup>1</sup>
- ▶ history files
- ▶ anything you do not want to track such as credential files etc

You can find some `.gitignore` templates online :)



The screenshot shows a GitHub repository page for `gitignore / Python.gitignore`. The file is 160 lines (131 loc) and 3.01 KB. The content of the file is as follows:

```
1  # Byte-compiled / optimized / DLL files
2  __pycache__/
3  *.py[.cod]
4  *$py.class
5
6  # C extensions
7  *.so
8
9  # Distribution / packaging
10 .Python
11 build/
12 develop-eggs/
13 dist/
14 downloads/
```

## Branching

a branch is a new/separate version of the main repository (current status!)

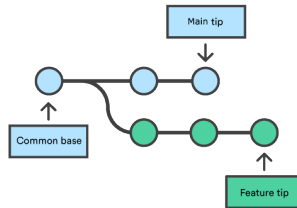
Why? – keeps the main branch free from questionable code

- ▶ `git branch` – list all branches
- ▶ `git branch branch` – create a new branch called 'branch'
- ▶ `git branch -d branch` – delete the branch called 'branch'
- ▶ `git checkout branch` – switch to the branch called 'branch'

Quicker way – `git checkout -b new-branch`

## Merging

- ▶ Create some files and write something in them
- ▶ Add and commit `git add .`, `git commit -m 'Add files'`
- ▶ Switch to the master branch `git checkout master`
- ▶ Merge with the new branch `git merge branch`







Please don't do this.