Cheatsheets / **Learn Git & GitHub**

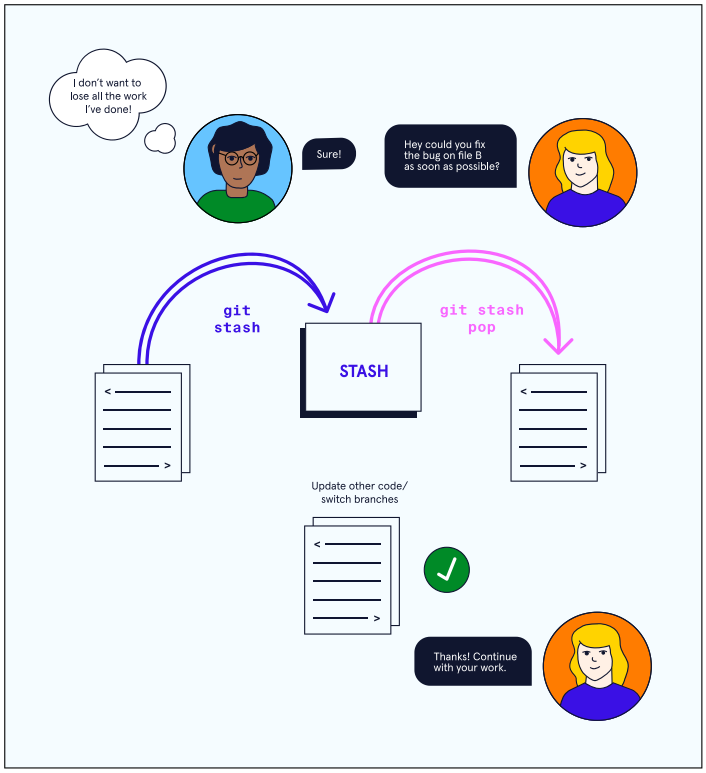
Important Git Operations

git stash

`git stash` allows you to get back to a clean commit point with a synchronized working tree, and avoid losing your local changes in the process of switching branches or tasks.

You're "stashing" your local work temporarily in order to update a previous commit and later on retrieve your work.

You can use `git stash pop` to retrieve from your stash.



git log options

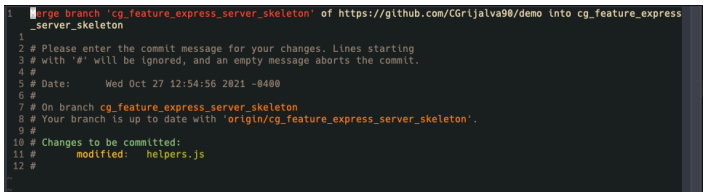
`git log` allows you to view the commit history of the branch you currently have checked out.

`git log --oneline` show the list of commits in one line format. `git log -S "keyword"` displays a list of commits that contain the keyword in the message.

`git log --oneline --graph` displays a visual representation of how the branches and commits were created in order to help you make sense of your repository history.

git commit –amend

`git commit --amend` flag allows you to update a commit. To avoid creating a new one, you could create your changes, stage them with `git add` and then type the command `git commit --amend` to update your previous commit.
The terminal editor will ask you to update your commit message.



Git aliases

If you have a set of commands that you use regularly and want to save some time from typing them, you can easily set up an alias for each command using Git config.
The following terminal command

```
git config --global alias.glop "log --pretty=
```

allows you to reduce the entire command to:

```
git glop
```

Showing Latest Commit Log

In Git, the commit you are currently on is known as the `HEAD` commit.

The output of the `git show HEAD` command will display everything the `git log` command displays for the `HEAD` commit, plus all the file changes that were committed.

```
$ git show HEAD
commit
735359632f3ca3fe572484a4ec3e0d7b0d9c8f2d
Author: codecademy
<exampleuser@codecademy.com>
Date:   Wed Jul 6 10:20:58 2016 -0400

    scene-5.txt

diff --git a/scene-5.txt b/scene-5.txt
index b12dd97..5dd5d4e 100644
--- a/scene-5.txt
+++ b/scene-5.txt
@@ -12,3 +12,7 @@ Hamlet:
I will.


+Ghost:
+My hour is almost come,
+When I to sulphurous and tormenting
flames
+Must render up myself.
\ No newline at end of file
```

Git Reset Using SHA

In Git, the `git reset commit_SHA` command can be used to set `HEAD` to the `commit_SHA` commit. The `commit_SHA` argument is the first seven digits of a previous commit's SHA. In this example, the `HEAD` was reset to the commit made on `Wed Jan 6`.

You can use `git log` to see a record of previous commits and their SHA values.

```
$ git log
commit
9d63f80111447544c303e9f1776fa08593a87310
Author: codecademy
<exampleuser@codecademy.com>
Date:   Wed Jan 13 18:55:53 2021 +0000

    Added updates to the file

commit
3ba6efbeece6ed530d85de5e313e52123fdf8cb4
Author: codecademy
<exampleuser@codecademy.com>
Date:   Wed Jan 6 10:11:13 2021 -0400

    Completed first line of dialogue

$ git reset 3ba6efb
```

Staging Multiple Files

In Git, the `git add filename_1 filename_2` command is used to add multiple files to the staging area at once. You can use `git status` to check if you properly added your files to the staging area.

```
$ git add scene-5.txt scene-7.txt
$ git status
On branch master
Changes to be committed:
  (use ""git reset HEAD <file>..."" to
unstage)

        modified:   scene-5.txt
        modified:   scene-7.txt
```

Remove File from Staging

In Git, the `git reset HEAD filename` command will remove `filename` from the staging area. Note that this command does *not* discard file changes from the working directory. You might use this command if you've added a file to the staging area, but the file includes incorrect edits.
You can use the `git status` command to make sure your file was properly removed from the staging area.

```
$ git reset HEAD scene-3.txt
Unstaged changes after reset:
M       scene-3.txt
```

Rolling Back to Last Commit

In Git, the `git checkout HEAD filename` command rolls back all changes that have been made to `filename` since the last commit. In other words, this command will change your working directory to look exactly as it did when you last made a commit.
You can use the `git diff` command to see if the rollback was successful. If `git diff` doesn't output anything, this means your working directory matches your last commit.

```
$ git checkout HEAD scene-5.txt
$ git diff
$
```

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