Git

Configuration Management (Version Control)

So what is Git?

- Version Control System
- When working on large projects in a group, version control systems (Git) enables us to:
  - Share/ collaborate in software development
  - Store/Restore different versions
  - Backup
  - Understanding what happened
- Initially developed by Linus Torvalds!

Git Advantages

- Distributed (everyone has their own code repository local to them!)
- Open Source (everyone likes open source code :))

General Git Workflow

1. git init
2. git add filename
3. git commit -m “Initial commit”
4. git push origin master

Git Concept: Init

What does it do: Initializes a Git repository locally

Example command:

```
git init
```

Git Concept: Clone

What does it do: Clones an entire Git repository, similar to svn checkout but you get the whole copy, so for a Git repository with a lot of history, this operation can potentially take a while

Example command:

```
git clone URL
```

Git Concept: Status

What does it do: Shows you the status of your current repository which shows files to be added, modified and untracked files as well.

Example command:

```
git status
```

```
# On branch master
# Changes to be committed:
# (use "git reset HEAD <file>..." to unstage)
#
#modified: hello.py
#
# Changes not staged for commit:
# (use "git add <file>..." to update what will be committed
# (use "git checkout -- <file>..." to discard changes in wo
#
#modified: main.py
#
# Untracked files:
# (use "git add <file>..." to include in what will be commi
#
#hello.pyc
```

Git Concept: Add / Remove

What does it do: As you can probably tell from the name, it adds or removes a file!

Example command:

git add filename OR git rm filename

Git Concept: Commit

What does it do: This commits your changes to the repository. If you don't do this, your changes will not be saved!

Example command:

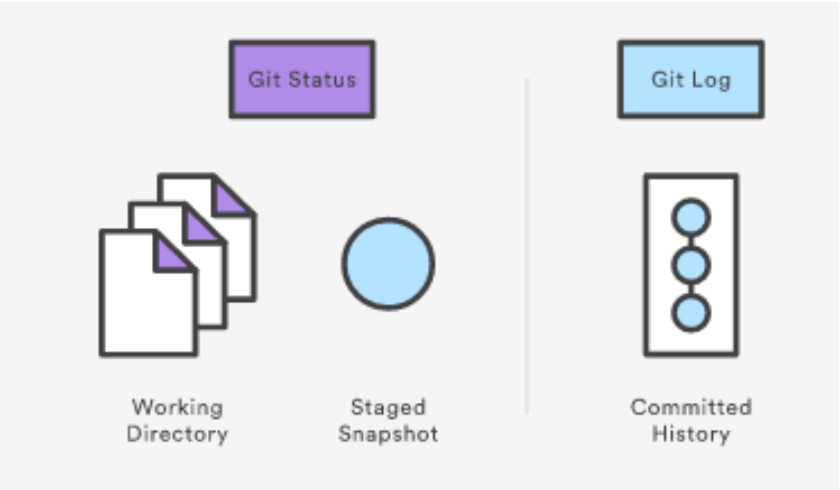
```
git commit -m "Some Message!"
```

Git Concept: Log

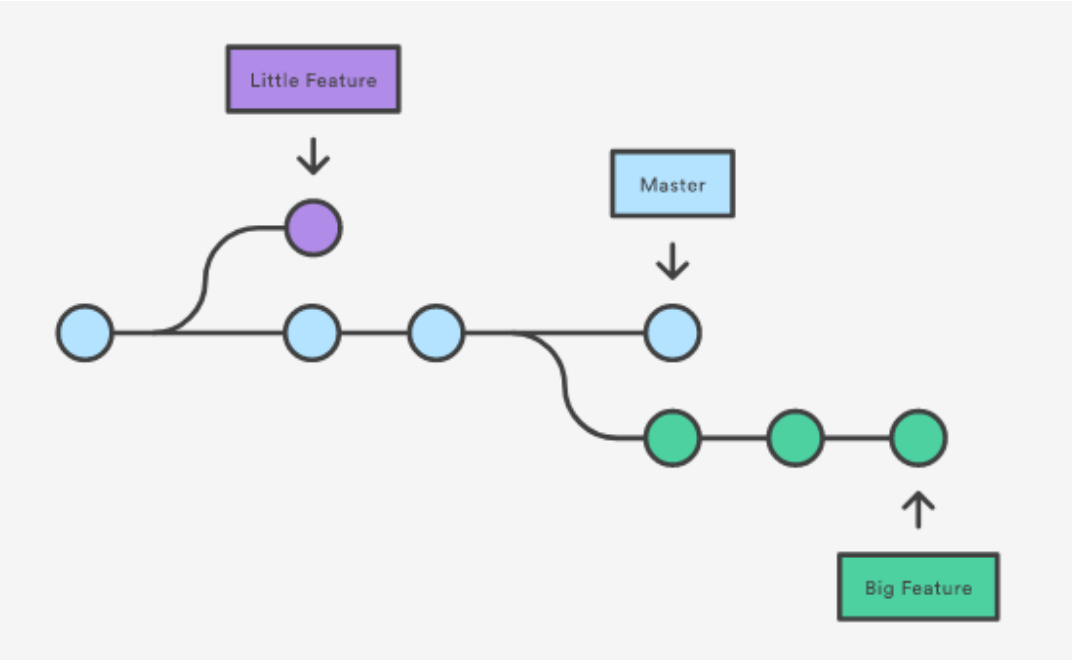
What does it do: Shows the history of commits into the system.

Example command:

```
git log
```



Git Concept: Branching



And Many More!

References:

https://www.atlassian.com/git/tutorials

https://git-scm.com/