Week 4: Version Control Continued and Introduction to Classes

Computational Tools and Techniques in STEM

Feb 19-21, 2019

Outline

Learning Goals

- **L1**: Unix directory structure and command line.
- **L2**: Using Git on local computer using git bash.
- **L2**: Using .gitignore file.
- **L3**: Using Git and Github.
- **L4**: Introduction to classes.

Local Workflow

Once you are in your directory in which you intend to use git:

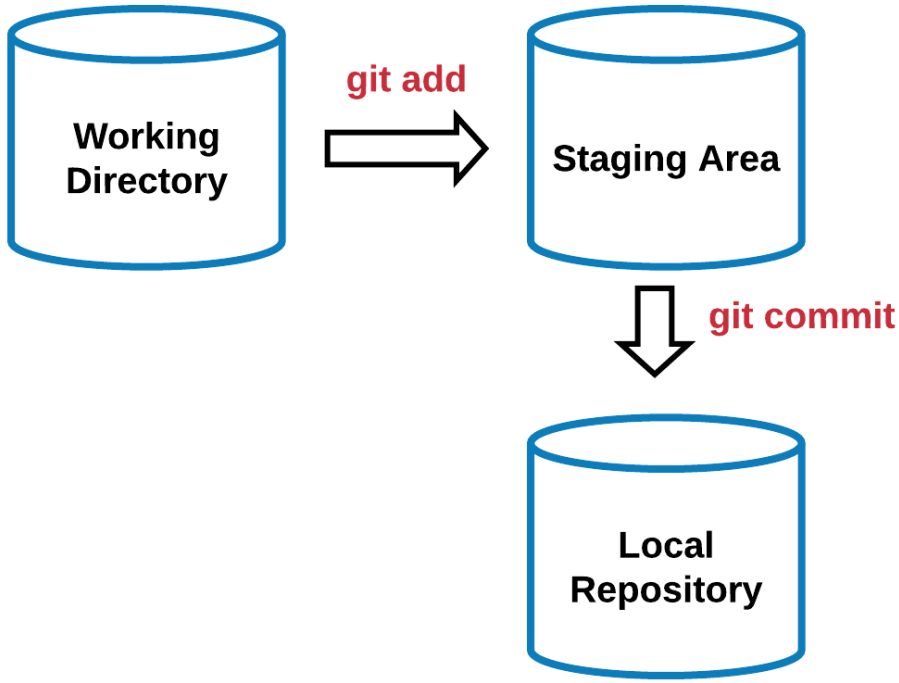
```
$git init
```

```
$git add yourfullfilename
```

```
$git status
```

```
$git commit -m "Put a descriptive message here."
```

```
$git log
```



Ignoring Files

How to ignore some files from tracking?

Create a file called .gitignore in the folder and add the names of the files you do not want tracked in there. E.g. the generated files.

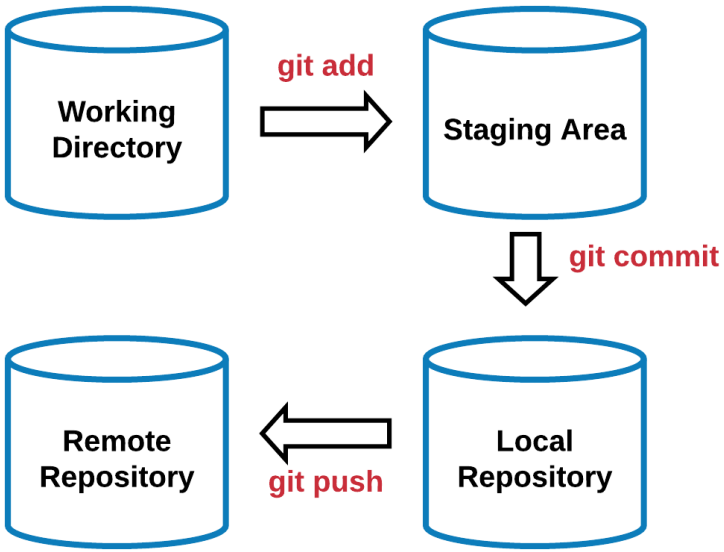
Where to put this file?

Put this file in the main working directory.

When to create this file?

Create this file before using “git add” command.

Remote Workflow




```
$ git remote add origin
https://github.com/user/
repo.git

$ git remote -v

$ git push origin master
```

Additional Git Commands

How to pull in changes from the remote repo into your local repo?

```
$ git pull
```

What is the difference between git status and git diff?

```
$ git status
$ git diff
```

What are some differences in initializing and committing in Github vs. your local system?

Exercise

Do the following:

- Put the particle code in a separate directory.
- Initialize git in there.
- Generate a plot file and make sure that it is ignored by git.
- Commit to your local repo.
- Push it to remote repo on your Github account.
- Go to your Github account, make sure that the push was successful.
- Add a comment to one of the files in your Github repo and commitit.
- Switch to your local repo again and pull the changes that you made on remote into your local repo.