



# Introduction to Git and GitHub

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# Before we start...



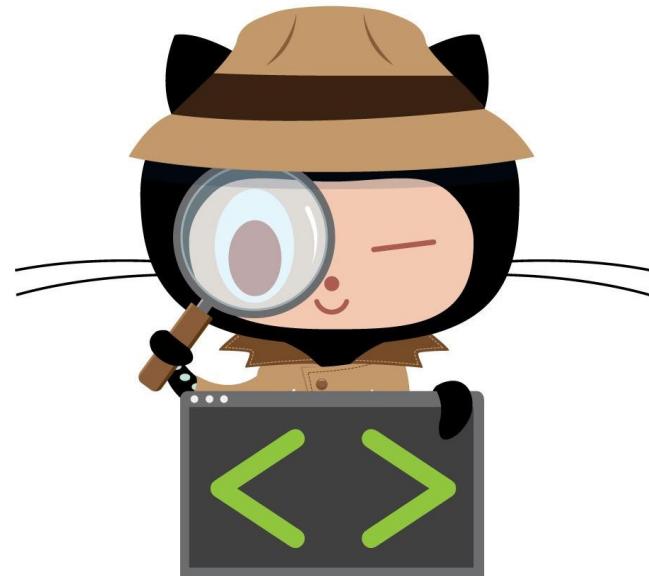
Git Installed



GitHub account



Your favorite editor



# Workshop Flow



**My first git:** What is Git and GitHub?



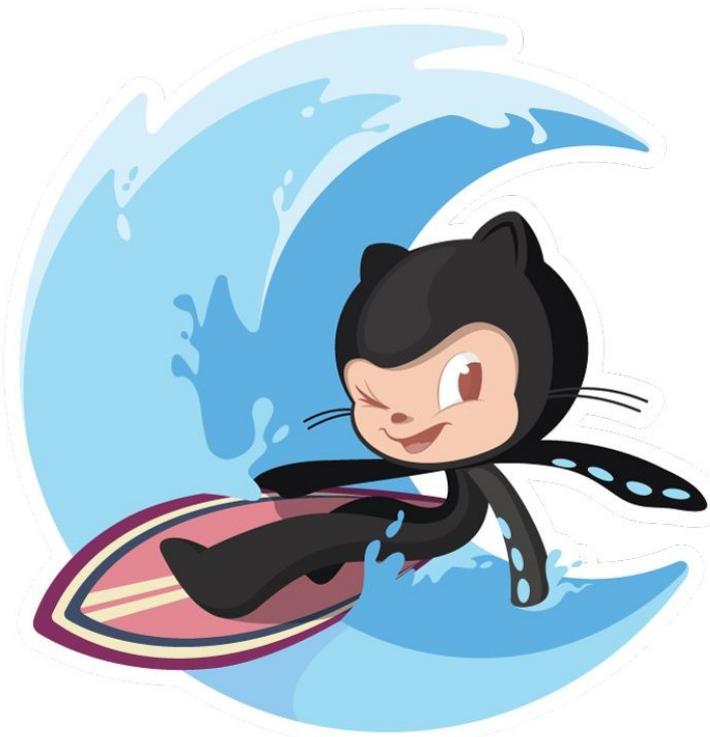
**git good:** Git Fundamentals 101



**git explore:** Explore the GitHub Universe



**open sourcing:** Doing some good for the tech community





# My First Repo!

What is Git and GitHub?



## So, What is Git?

A Distributed Version Control System.

Any project which uses Git will have a `.git` folder which stores all the history of the project.



## History:

Know exactly which files changed, who made those changes, and when those changes occurred.



## Backup:

Ability to have different versions of the code in different places.



## Collaboration:

Collaborate easily with other people on the same project by uploading and receiving changes



## What is GitHub?

**GitHub** is a website that allows us to use **git** and create repositories **online**. It can also store all your projects online for free.

# What is a repository?

A repository is a container that houses your project and its' history. If your project folder contains the “**.git**” folder, then you are working with a repository!



# Let's get started!



If you are on windows, open Git-Bash.



If you are on linux or Mac, fire up a terminal.



# Let Git know who you are



```
$ git config --global user.name "your_username"  
$ git config --global user.email "hello@mail.com"
```

GitHub uses the email address that is set in your local Git configuration to associate commits pushed from the command line with your GitHub account.

# Initializing a new repository



```
# creating a new folder for our project
$ mkdir MyProject
# changing directory to our project folder
$ cd MyProject
# initializing the current folder as a repository
$ git init
```

Initialized empty Git repository in /home/user/MyProject/.git/

# Commits

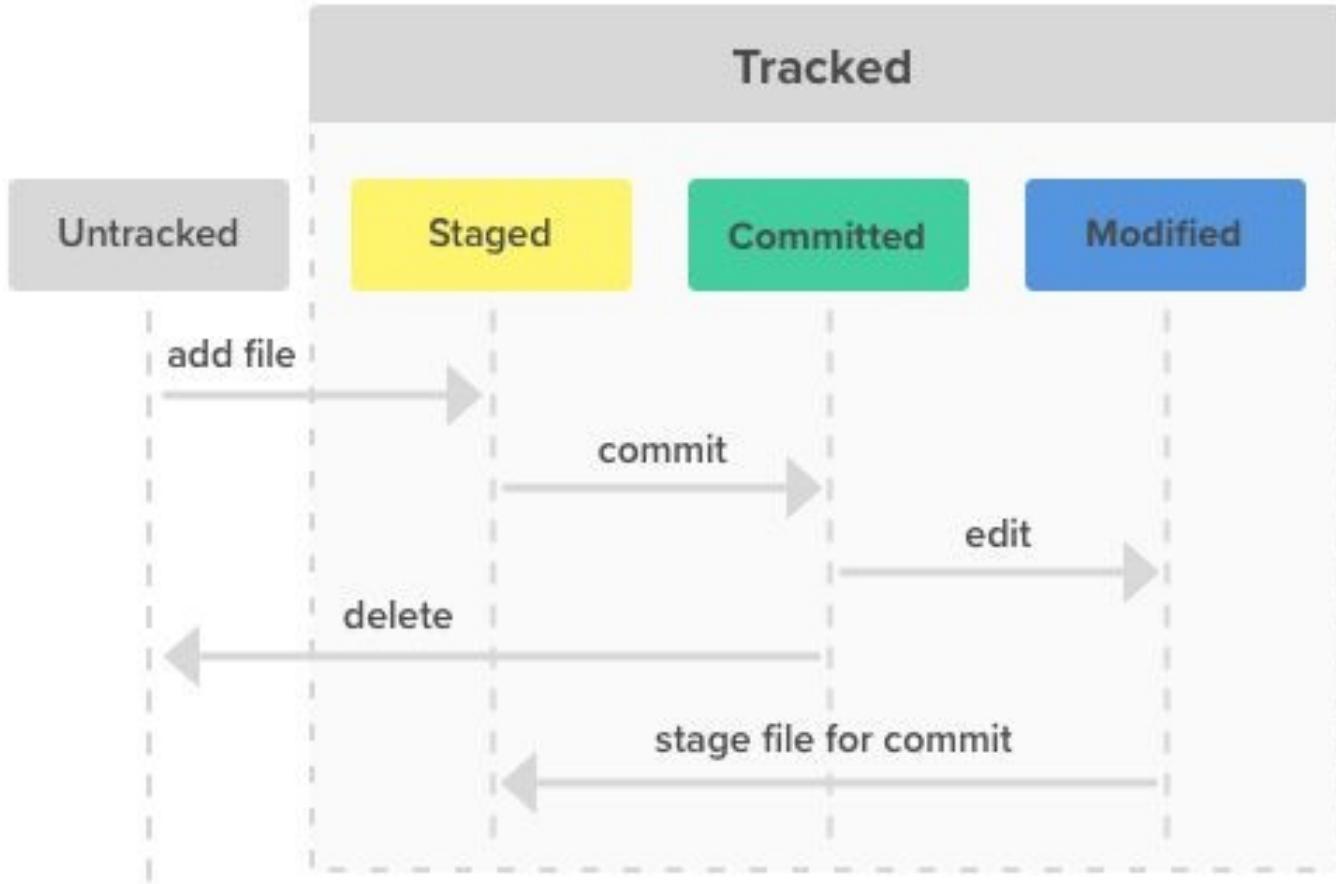
Checkpoints/Snapshot of the state of your repository (project) at a particular time.



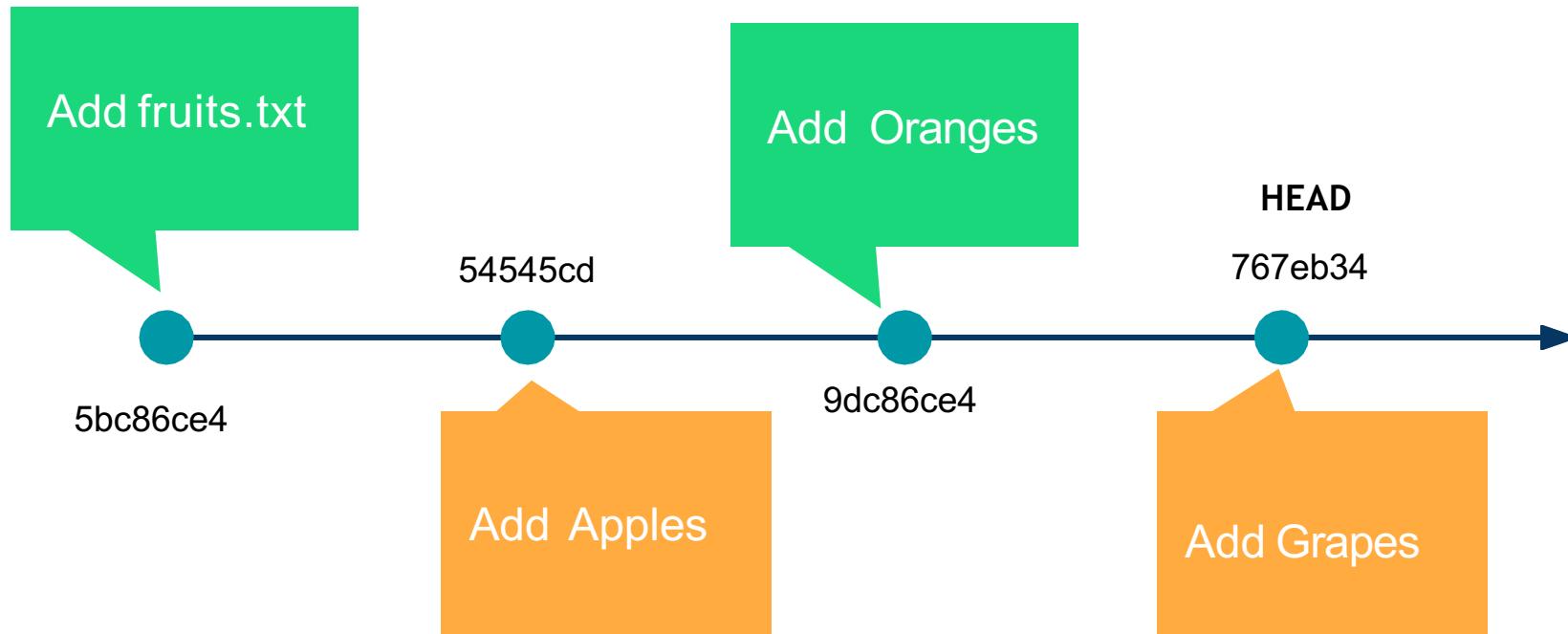
# Creating your first Commit



```
# shows the state of the working directory and the staging area.  
$ git status  
# Add the files to staging area  
$ git add fruits.txt  
# Commit the changes into the repository  
$ git commit -m "Add fruits.txt"
```



# Git Log



# To Reset your Commits



```
# To reset files from the staging area after git add
$ git reset [options]
# To reset particular commit or file
$ git reset HEAD/file_name [options]
# resets the code and commits
--hard
# resets the code and commits but keeps it in the staging area
--soft
# rests commits and keeps it in the workingdirectory (default)
--mixed
```

# Git Good!



Working with GitHub and  
fundamentals of Gut 101.



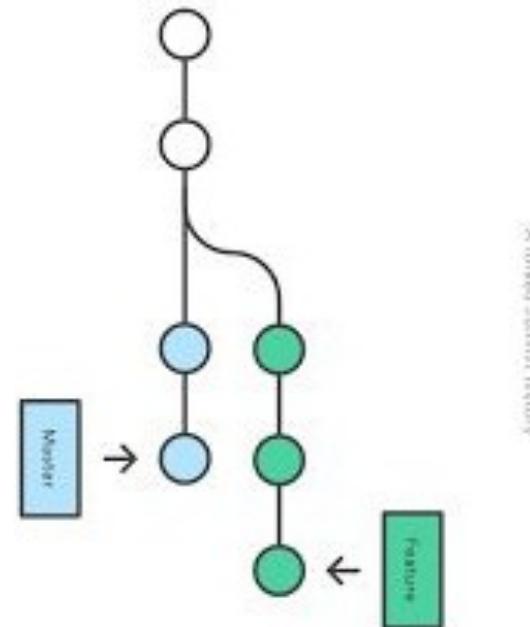
# Downloading/Updating repos



```
# To download a remote repository  
$ git clone <repository url>  
# To grab changes from a remote repository and add to yours  
$ git pull  
# To submit your changes to remote repository  
$ git push
```

# Git Branches

```
● ● ●  
# To list all branches  
$ git branch  
# To create a new branch  
$ git branch MyBranch  
# To change the control to new branch  
$ git checkout MyBranch  
# To merge two branches together  
(master)$ git merge MyBranch
```



Time for some handson!

<https://gitme.js.org>



What can we do with  
GitHub?

*Well, what not?*

# GitHub Education

Programs and technology leadership at yourschool



**GitHub**  
Student Developer Pack



**GitHub** Classroom



**GitHub**  
Campus Experts



**GitHub** Campus Advisors

# Events on GitHub

