People Walking In - Install Git

- Windows
  - https://gitforwindows.org/

- Mac
  - https://git-scm.com/download/mac

- Linux Systems
  - https://git-scm.com/download/linux

WELCOME TO COMPUTER SCIENCE CLUB!

MEETING 4 (Tutorial)
9/17/2019

Today's Discussion:
Git Started With Git

Get a GitHub Account

- Go to github.com

- Create an account with your email address.

What is Git?

- Git is a source control tool

- Git manages content, version history, and changes in a project and its files

- Lets multiple developers work on one project together

- Keeps track of the history of changes on a file

Why Git?

- Git allows you to work with other developers to finish your projects, this can be extremely helpful for your upper division courses like User Interface Design or Software Engineering

- Git is an exceptionally common tool used in industry and is a very (essential) valuable tool to know

- Create GitHub account and show off all your cool projects!

Common Git Terminology

- **Repository** ("Repo") - An object database that stores files, versions of files, commits, deletions, and content for your project

- **Branch** - A version of the repository that diverges from the main working project

- **Master** - The primary branch of all repositories, all committed and accepted changes should be on the master branch

Common Git Terminology (Cont.)

- **Clone** - Creates a local copy of the repository on your computer

- **Add** - The files that should be committed (these files should be working)

- **Commit** - Grouping of files that will be sent to the repo that are identified with what changes are made.

- **Push** - Send the changes to the remote branch (repository on GitHub) with commits made to your current branch

Common Git Terminology (Cont. 2)

- **Pull / Pull Request** - When changes are made and want to be added to the master branch, Pull Requests are used to ask repo maintainers to review changes and then merge those changes into the master branch.

- **Merge** - Takes changes from one branch and adds them to another.

- **Upstream** - When you establish a new branch on your local machine and want to add it to the remote repository (Github)

Common Actions

- **Creating / Cloning your Repository**

- **Switching Branches**

- **Adding Content**

- **Pushing your changes**

- **Making Pull Requests / Merging Branches**

Creating / Cloning your Repository

1. **Create a folder/directory where you want your repository to be**

2. **Open git bash**

3. **Type:** `git clone <repo-url>`

Switching Branches

1. **To create and switch to a new branch**
    a. **Type:** `git checkout -b <branch-name>`

2. **To switch from your branch to another**
    a. **Type:** `git checkout <branch-name>`

Getting files ready for Push

1. Type: `git add <filename>`
   a. You can also use: `git add .` or `git add -A`
      i. This adds all the content

2. Type: `git commit -m "message"`
   a. The message should be meaningful about what changes you have made

Pushing your content

- **Quick Recall:**
  - **Push -** Updates a remote branch with commits made to a current branch.

1. **Have added your content (previous slide)**
2. **Type:** `git push <repository-name>`
   a. **If you do not specify the repository name, it defaults to origin.**
3. **Ex:** `git push origin master`
   a. **Sends changes to your remote repository**

Pull / Pull Requests

1. To directly download changes into a branch
   a. Type: git pull <remote> <branch>
   b. Ex: git pull origin master
      i. Changes from your local repo are changed into master

2. Better practice is Pull Requests

Now Follow Along!

- **Now follow along!**

- **Make sure that you have provided us with your email address!**

Your Turn

1. Create a text file

2. In the text file, write your favorite pizza

3. Save the file as yourname.txt

Questions/Requests!

Contact Information

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