CS 413
Ray Tracing and Vector Graphics
Git Basics

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1/30/2019

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Git:

- Git is a **widely used** version control system for software development.

- It is a distributed revision control system with an emphasis on speed, data integrity, and support for distributed, non-linear workflows.
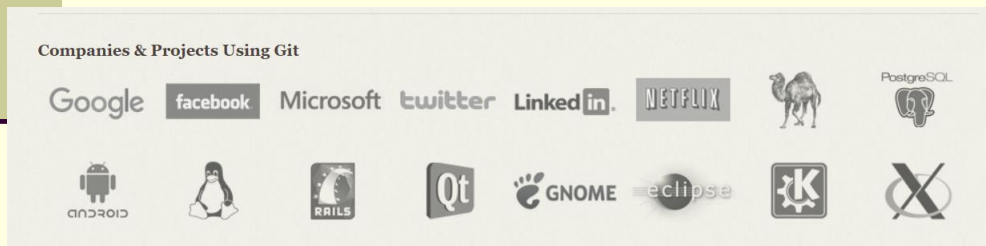
GitHub:

- GitHub is a Web-based Git repository hosting service. GitHub offers:
  - ❖ Free Open Source repositories to anyone.
  - ❖ Free Open Source and Private repositories to students.
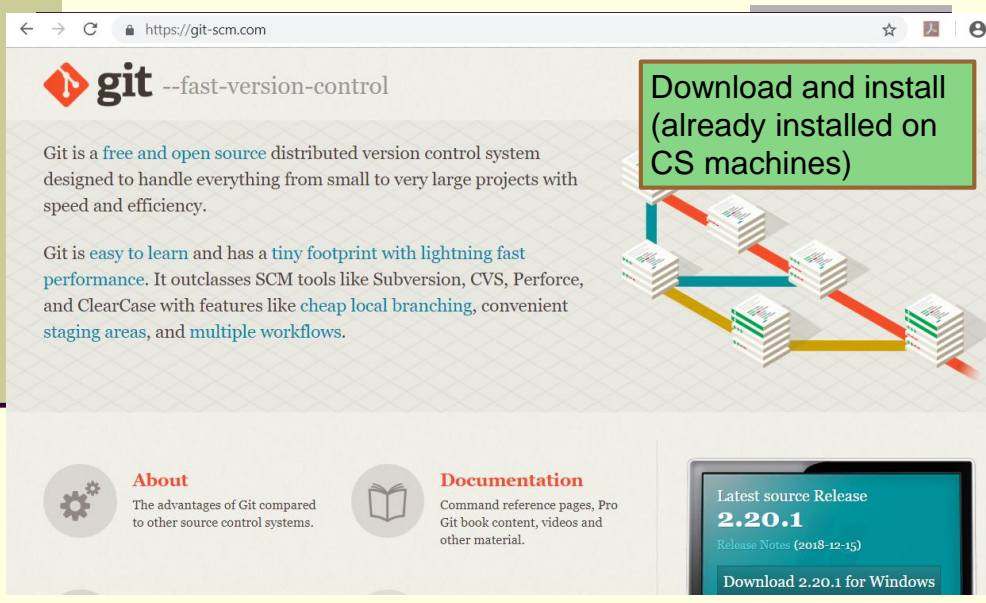
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CS employers expect Git experience

- Learn Git.

- State your exp on resume.

- Have public repo and give link to employer (many will ask).
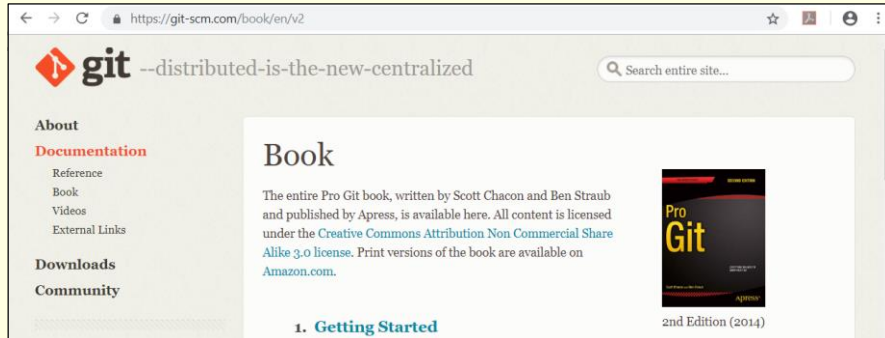
Companies & Projects Using Git

Google facebook Microsoft twitter Linked in. NETFLIX PostgreSQL

ANDROID RAILS Qt GNOME eclipse

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Git Client: **http://git-scm.com/**

← → C 🔒 https://git-scm.com

git --fast-version-control

Git is a free and open source distributed version control system designed to handle everything from small to very large projects with speed and efficiency.

Git is easy to learn and has a tiny footprint with lightning fast performance. It outclasses SCM tools like Subversion, CVS, Perforce, and ClearCase with features like cheap local branching, convenient staging areas, and multiple workflows.

Download and install (already installed on CS machines)

About
The advantages of Git compared to other source control systems.

Documentation
Command reference pages, Pro Git book content, videos and other material.

Latest source Release
2.20.1
Release Notes (2018-12-15)

Download 2.20.1 for Windows

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Learning Git

■ Many online videos (youtube), tutorials and references.
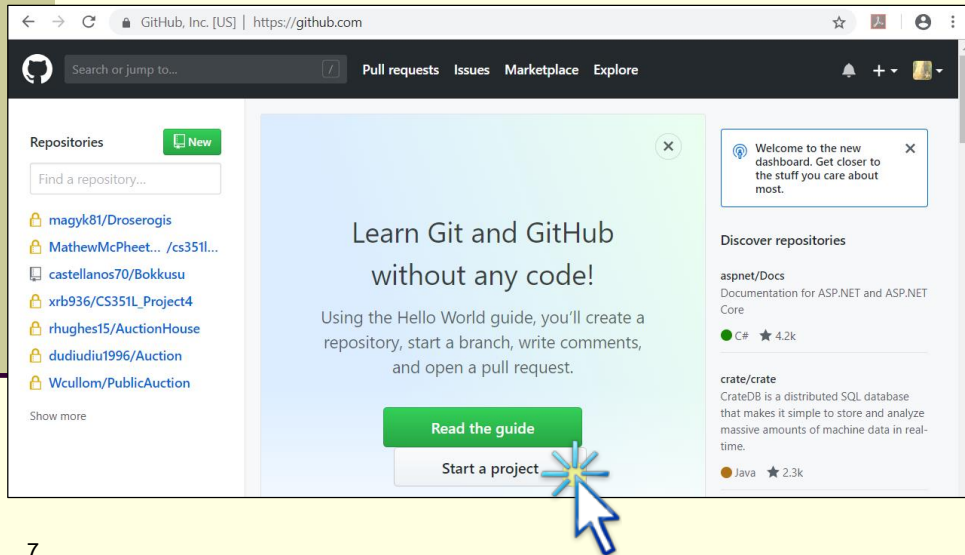
■ Pro Git:

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GitHub (Free *Private* repo for Students)

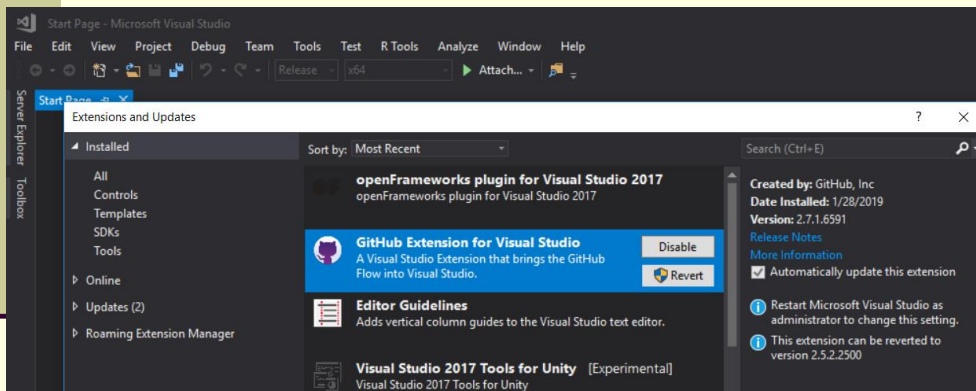https://github.com/

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Start a project
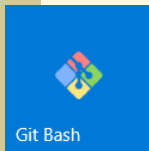

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Add Visual Studio Git plugin

Visual Studio → Tools → Extensions and Updates

Video: Using Github from Visual Studio 2017

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Git Bash Shell

Gives a linux line shell (ls, cd, pwd, …
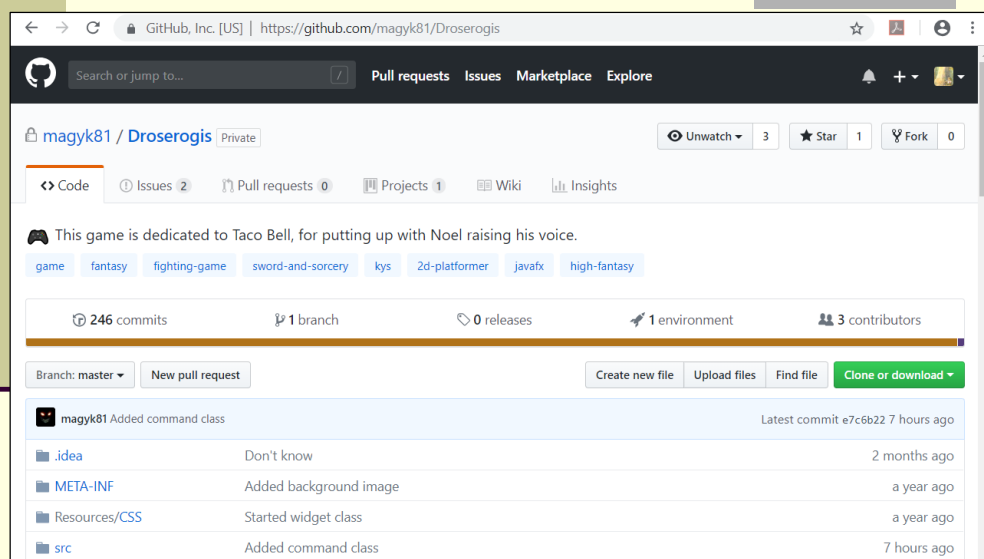
`git clone https://github.com/`*yourpath*

`git add -A` //to add files to the repository
`git commit -am 'comment'`
          // -a (all) -m (message)
`git pull origin master`
`git push origin master`

`git stash` // save and remove all local changes

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GitHub Web View

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The `.gitignore` File

A `.gitignore` file is an ASCII text file that specifies intentionally untracked files that Git should ignore. Files already tracked by Git are not affected.

Each line in a `.gitignore` file specifies a pattern. Examples:

- In general, Git uses the same file patterns as does Ubuntu (i.e. `*.class` matches any file with the suffix `.class`).

- Blank lines have no effect.

- A line starting with # serves as a comment. Put a backslash ("\") in front of the first hash for patterns that begin with a hash.

- Trailing spaces are ignored unless they are quoted with backslash ("\").

- An optional prefix "!" negates the pattern.

For more detail see: https://git-scm.com/docs/gitignore

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