Version Control

Day1_VersionControlDeck_V2_Good_Final_FinalFinal

WEB PROGRAMMING FUNDAMENTALS
web design and development
full sail university

What Is Version Control?

Keeping track of multiple versions and changes to files.

Version Control

- Version Control Systems (VCS)
- Source Code Management (SCM)
- Great at tracking changes
  - Especially text changes!

You Are Already Using Version Control Even If You Don't Use Software!

Version Control

Examples of Version Control (Non-Source Code)

- Microsoft Word's Track Changes
- Photoshop's History
- Undo: Command +z

Version Control

Examples of Version Control (Non-Source Code)

- File Naming
  - Save As....For Individual Files
  - Budget_V3.xls , Logo_Final_2.ai
- Duplicate And/Or Compress Directories

Version Control

Why Use Version Control Software?

- History
  - Change By Change Log Of Your Work
- Friction Free Undo
  - Short Term & Long Term
- Fearless Experimentation
  - Easy To Create A "Sandbox" To Try New Ideas

Why Use Version Control Software?

- Peace Of Mind
  - Most Things Are Automatic

Version Control

What Can You Do With VCS?

- Backups
  - Every Version Is Kept Around
- Change Tracking
  - Commit Messages Let You Know Why Things Were Changed

Version Control

What Can You Do With VCS?

- Rollback To Previous Versions
  - It's Like Undo For Coding
- Labeling Significant Changes
  - Tags/Labels Identify The State Of The Source Code That Matches Each Major Event

Version Control

Key Concepts

- Repository
  - A Database Of Sorts
  - Where Your Files & Their History Is Stored
- Working Set
  - Current State Of The Files
  - Stored On Your Local Computer

Version Control

Key Concepts

- Add
    - Insert New Files From The Working Set Into The Repository
- Commit or Check-In
    - Copy Changes From Working Set To Repository

Version Control

Key Concepts

- Update or Check-Out
  - Copy Changes From The Repository To Working Set
- Tag or Label
  - Mark The Current State Of The Repository For Future Checkout

Version Control

Key Concepts

- Revert or Rollback
    - Overwrites Files In Your Working Set With Specific Version
- Branch or Fork
    - Make A Clone Of The Repository

Key Concepts

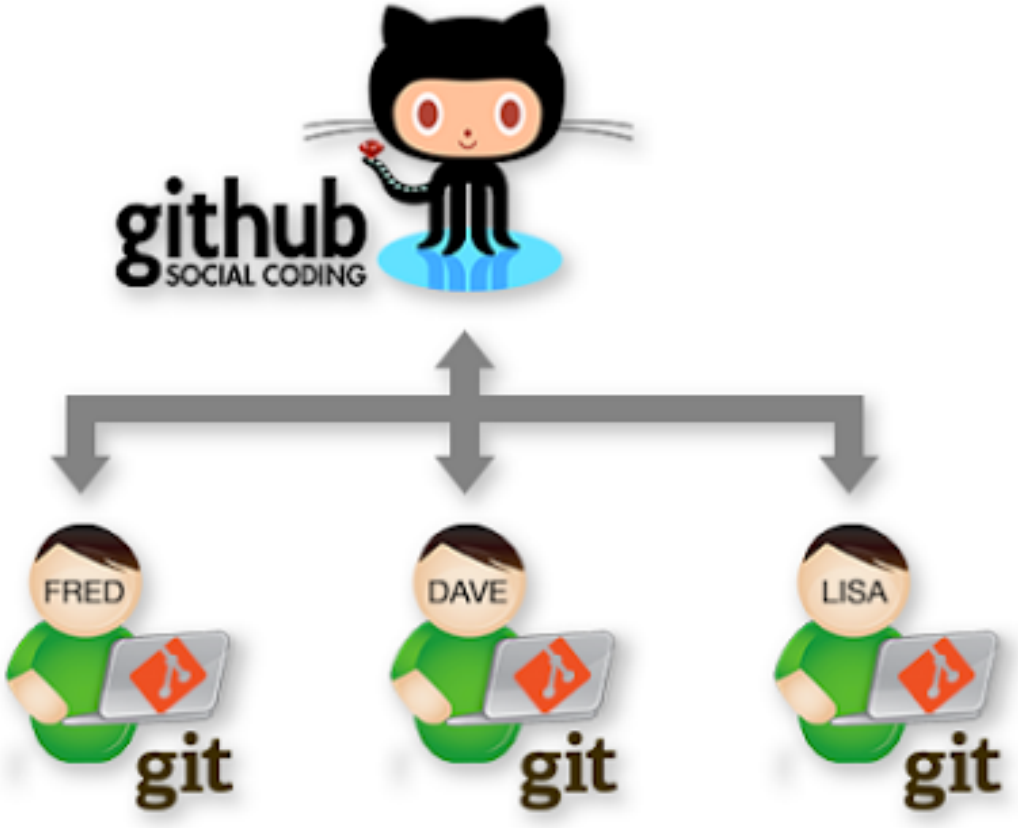
- Merge
    - Integrate Your Branch Back Into The Original Repo

What Is Git?

- Git Is The Software That You Install On Your Computer
- Easy To Collaborate
- Track Edits
    - Review History Log Of Changes
    - View Differences Between Code Versions
    - Retrieve Old Versions

What Is GitHub?

- GitHub Is An Online Place To Store Your Repos
- Gives You A Graphical Interface To Compare Changes & Control User Access


github
SOCIAL CODING
FRED
DAVE
LISA
git
git
git

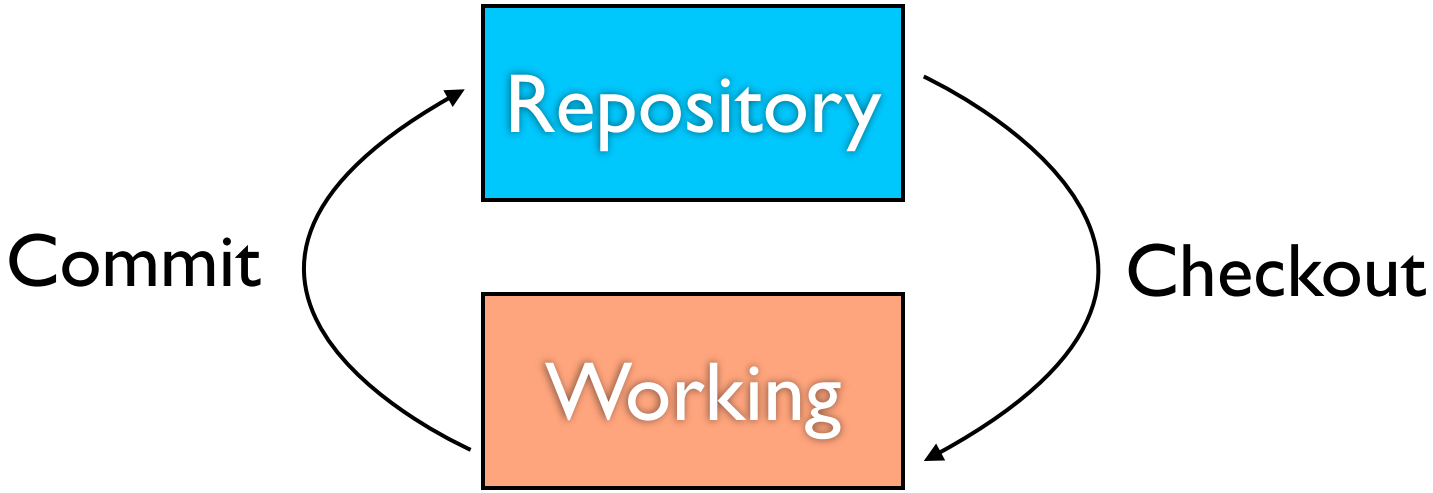
Git Is Great At:

- HTML, CSS, JavaScript, PHP, Etc.....

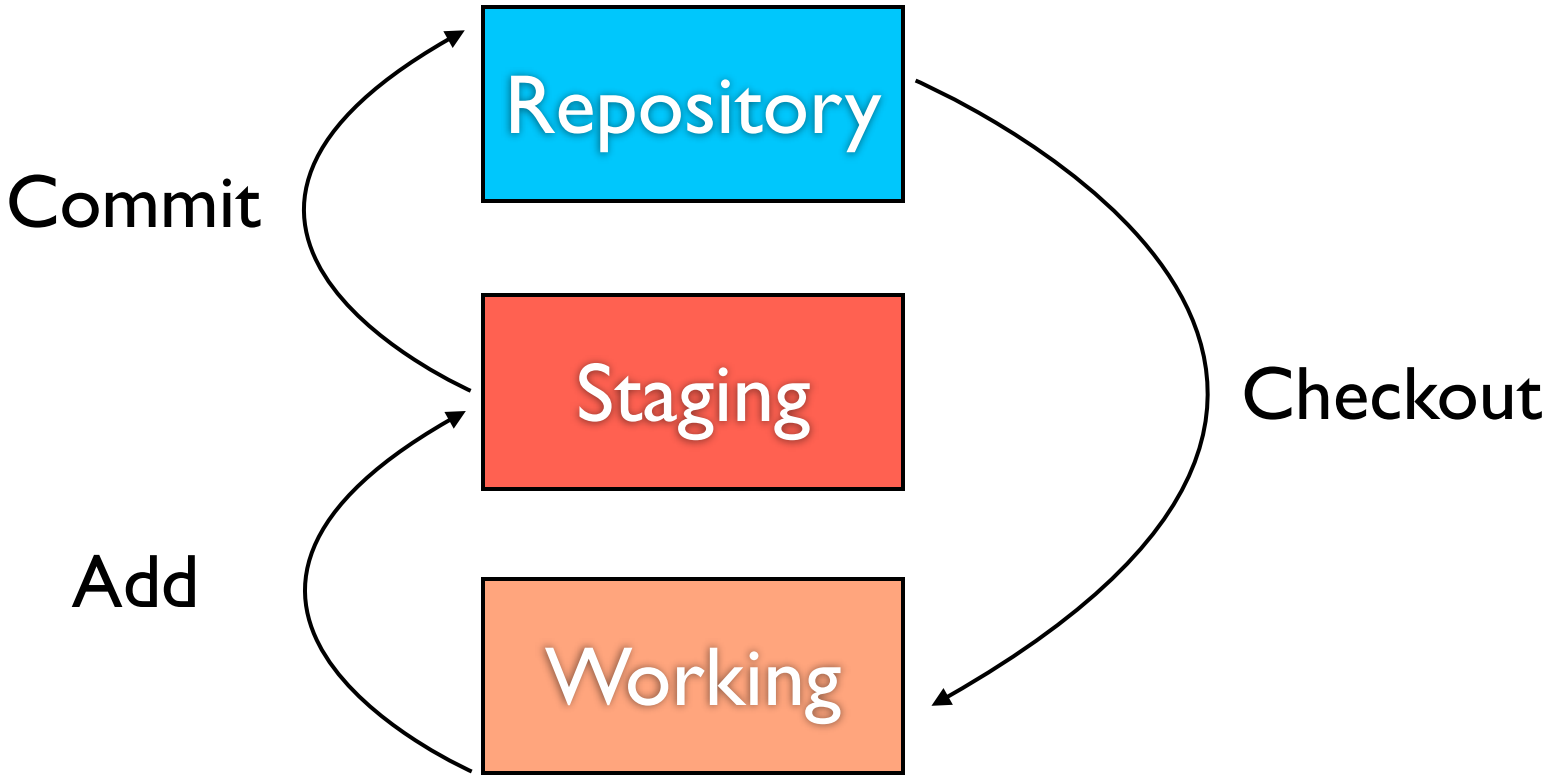
Git Is NOT Great At:

- Non-Text Files
- Images, Movies, Music, Fonts
- Word Processing Files, Spreadsheets, PDFs

Two Tree Architecture



Three Tree Architecture



Example

Repository

Staging

Working

file.txt (v1)

Installation

Let's Get Started!

http://git-scm.com/

Installation

https://github.com/

Installation

Repository Name

LastName_FirstName_WPF

Installation

https://mac.github.com/

Graphic Interface To Use GitHub