CMPSC 104 – Document Engineering

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Introduction to Git

- A distributed version control system.
- Tracks changes in source code during software development.
- Facilitates collaboration, maintains a history of changes, and supports branching and merging.
- Software development, documentation, any project requiring version control.
    - Over 70% of developers use Git!

Why We Use Git

- Collaboration
- Version Control
- Branching and Merging
- Distributed Development

Installing Git

- Installation process on Windows, Mac, and Linux.
  - Git installed by default on most Mac and Linux machines

- Checking if you already have Git installed
  - Mac users, open up “Terminal”.
  - Windows machine, open the windows command prompt.
  - - *git version*
    - Version of Git or Git is an unknown command

Installing Git on Windows

- Git for Windows installer and download the latest version.
- Open the windows command prompt (or Git Bash if you selected not to use the standard Git Windows Command Prompt during the Git installation).
- Type *git version* to verify Git was installed.

Installing Git on Mac

Most versions of MacOS will already have Git installed, and you can activate it through the terminal with git version

- Download for macOS.
- Open the command prompt "terminal" and type git version to verify Git was installed.

Installing Git on Linux

Git was originally developed to version the Linux operating system!

Debian/Ubuntu

- Git packages are available using ***apt***.
- Run the following command to make sure everything is up-to-date: ***sudo apt-get update***.
- To install Git, run the following command: ***sudo apt-get install git-all***.
- Verify the installation by typing: *git version*.

Fedora

- Git packages are available using ***dnf***.
- To install Git, navigate to your command prompt shell and run the following command: ***sudo dnf install git-all***.
- Verify the installation by typing: ***git version***.

Note: You can download the proper Git versions and read more about how to install on specific Linux systems, like installing Git on Ubuntu or Fedora, in git-scm's documentation.

Configure Git

- git config --global user.name “xxxxx"
- git config --global user.email “xxx@xxx.com"

Creating Git Folder

- mkdir myproject
- cd myproject

Git Init

Command: git init

- Initializes a new Git repository in your project directory (/Users/user/myproject/.git/).
- You just created your first Git Repository!