Module 1 Day 1

Introduction to Tools

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- Hours: 8:00am – 4:00pm

Today’s Goals

- Your typical day
- Windows / File Explorer
- Intro to Command shell (Bash)
- Git Source Code Control
- Git commands review

Your Typical Day

8:45am	Quiz closes	You are expected to complete all quizzes to help you and me assess your understanding.
9:00am – noonish	Pulse survey Quiz review Class instruction	We will try to take a break around the top of each hour.
Noonish or 3pm-ish	Hours vary, but there MAY be Pathway sessions	There are not Pathway sessions every day, but a few times per week.
Afternoons	Individual exercises Pairs exercises (some days)	Homework. Don't forget to PUSH your work!!! Homework is due 2nd morning after it is assigned. (homework assigned Monday is due Wednesday 9:00am)
Mid-afternoon	Quiz opens on Socrative.com Lecture code pushed to c-main Recording posted to Ryver	
Afternoons / evening	Take quiz on today's topic Read student book on tomorrow's topic	Please complete the quiz prior to the start of class.

Verify Your Machine

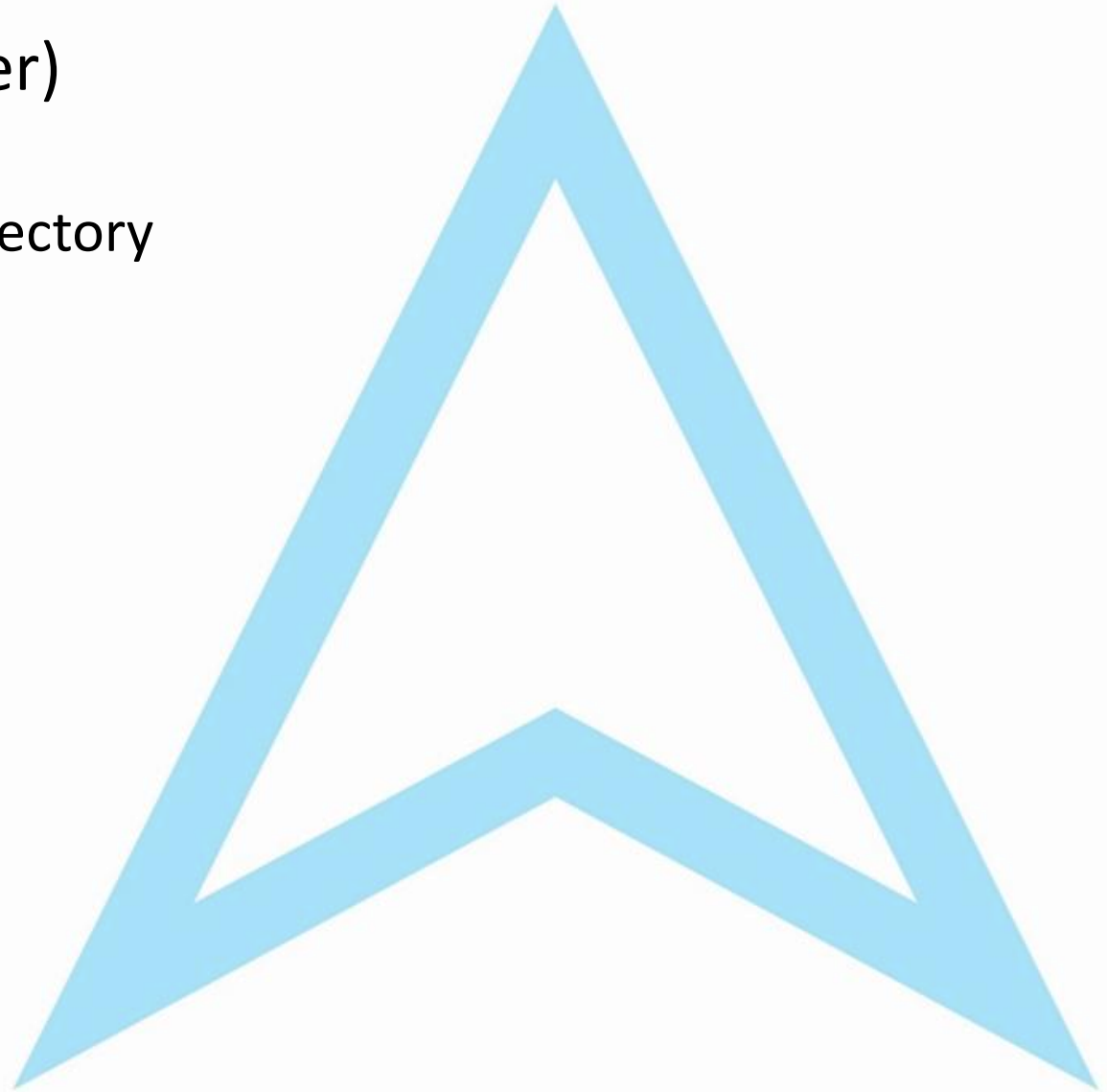
- Any outstanding issues from last week?

Windows / File Explorer

- Windows Start
  - Finding programs
  - Pinning to Start, Taskbar
- File Explorer
  - Launching
  - Current Working Directory (Folder)
  - Navigating
  - Creating Folders and Files
  - Deleting Folders and Files

Command Shell (Bash)

- The “working directory” (aka, folder)
  - pwd – Print working directory
  - cd – changes the current working directory
  - Absolute vs relative paths
- Creating and deleting folders
  - mkdir – Make directory
  - rmdir – Remove directory
- Special symbols: ~ / . ..
  - / root directory
  - ~ user's home directory
  - .. the current directory's parent



Command Shell (Bash)

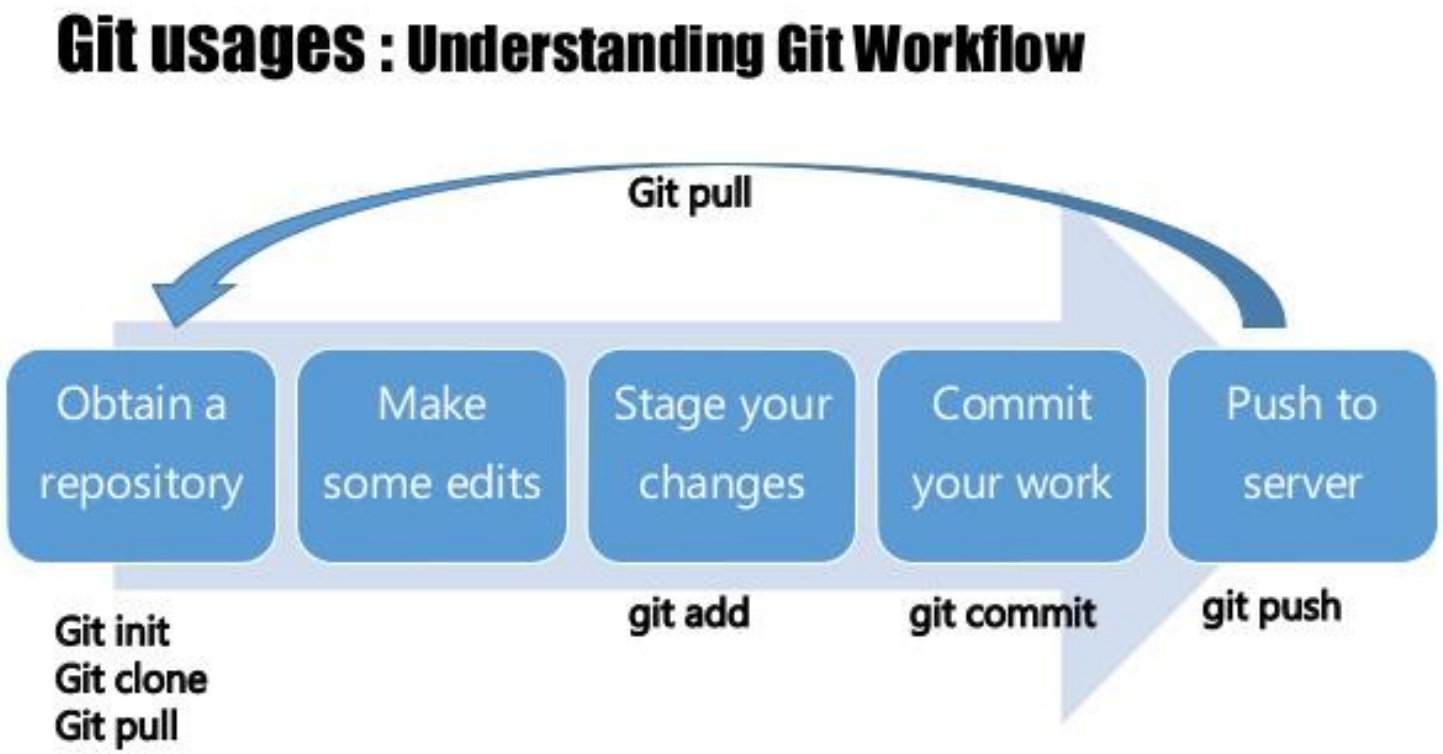
- Listing, creating and deleting files
  - ls
  - touch *filename.ext* – creates an empty file (updates the mod date of an existing file)
  - rm *filename.txt* – remove (delete) a file
  - mv *source.txt target.txt* – Move (rename) a file
  - cp *source.txt target.txt* – Copy a file
- Recursively Delete folders and files
  - rm –r *foldername*
- Cheat sheet: https://www.git-tower.com/learn/cheat-sheets/cli

Source Code Control with Git

- Version Control
  - Code-sharing
  - History
  - Parallel development
- Git
- Local and remote repositories
- BitBucket and GitHub

The Git Workflow

- Git clone
- Git pull
- Git add
- Git commit
- (git pull & git commit)
- Git push



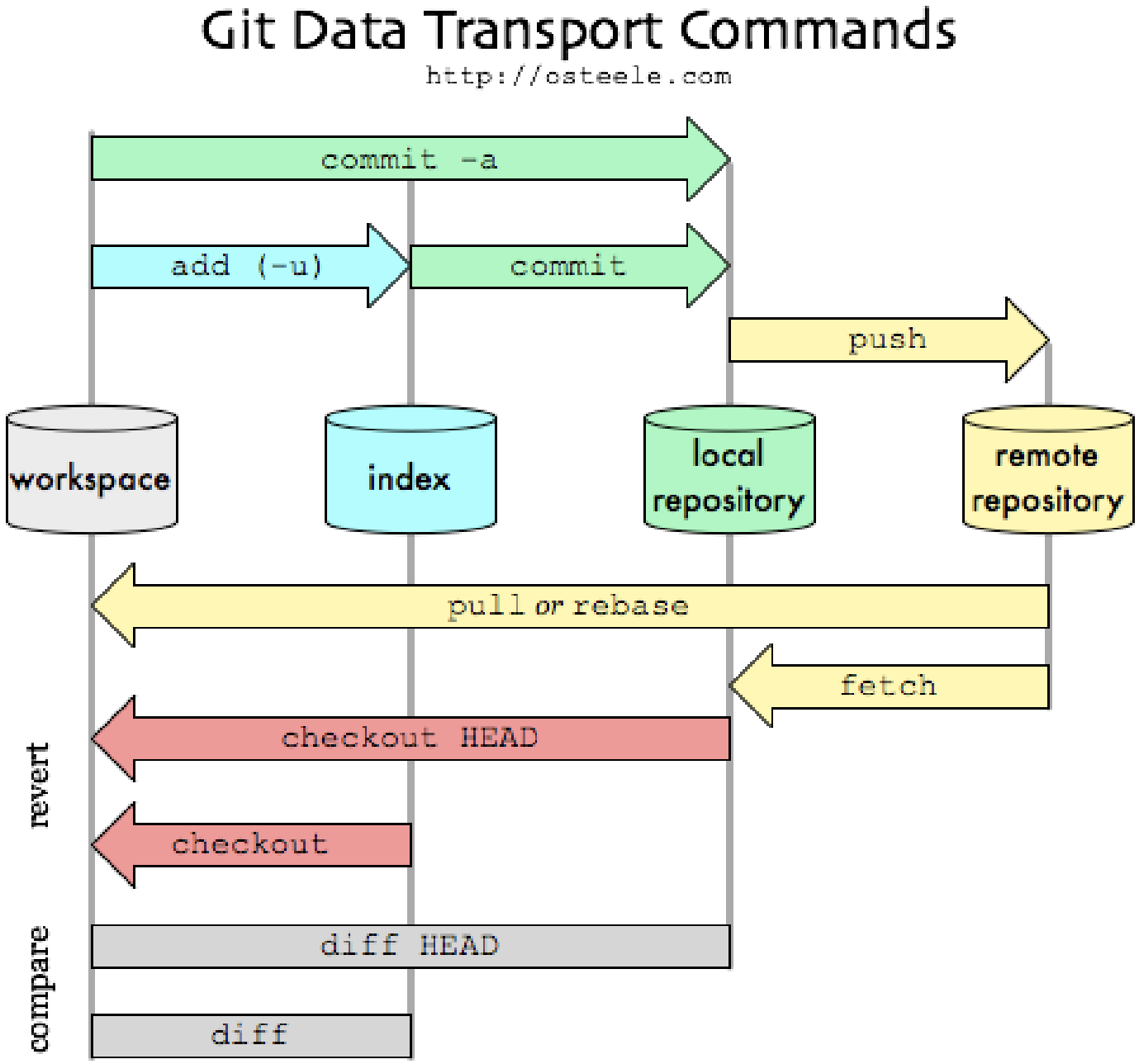
Three-tree Architecture

1. The Working Directory
   - This is your local folder tree
2. The Staging Index (or just Index)
   - This is a place that "collects" one or more changes to be committed to the repository
3. The Repository (or HEAD)
   - This is where "committed" or "good" code is stored for posterity.

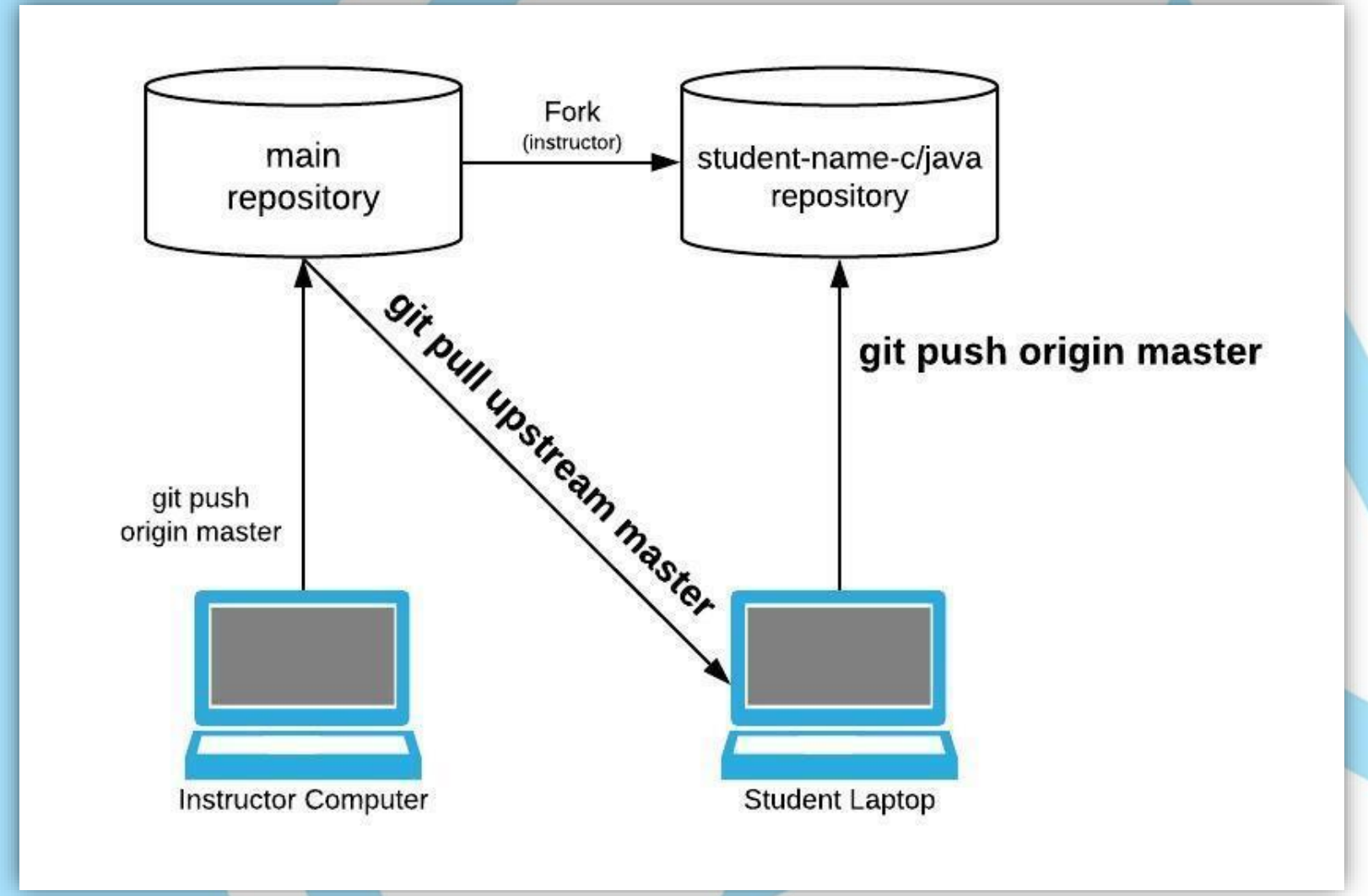
NOTE: These are all parts of your LOCAL git repo. You can also ship your local repo to be stored remotely (BitBucket, GitHub, etc)

Git Workflow Detailed

- Workspace: the files and folders in your git folder
- Index: “Staged” files, to be added / updated into your repository
- Local: all historical committed changes to all of your files, stored on your machine
- Remote: the shared, cloud version of the repo



Git Repo Setup



Your Most Important Git Commands

- Before class starts:
  - >>**git pull upstream master**
    - Pulls slides, lecture code and exercises from c-main ("upstream") to your local repo, staging and working trees
- When you have done significant work on exercises
  - >>**git status**
    - Shows what work you have done (in your working tree)
  - >>**git add –A**
    - Move ALL your changes to the staging tree
  - >>**git commit –m "Complete module 1 day 1 exercises"**
    - Move all the staged changes to your repository
  - >>**git push origin master**
    - Push changes in your local repo to the remote repo "origin"

Homework

- Student exercises
  - View the ReadMe
    - Open With Visual Studio Code
    - Ctrl-Shift-V to Preview
  - Do the exercises
  - Push your work
    - Git push (or git push origin master)
- Reading for tomorrow
  - Student Book
- Quiz posted mid-afternoon
  - Visit http://www.Socrative.com