MODULE 1: INTRODUCTION TO PROGRAMMING

Introduction to Tools

TECH ELEVATOR
A Stride Company

Welcome to Tech Elevator!!

ELEVATE YOURSELF

Tom Anderson

- Seattle-ite
- U of W BS
- Capella MS
- Been there, done that
  - ✓ Microsoft
  - ✓ Blackberry
  - ✓ PA Cyber
  - ✓ Various Startups
- Passionate Golfer

  (although not very good)

https://www.linkedin.com/in/noctivagan

How’s it going to feel?

Who is this?

Net Worth (2024) $1.3 Billion

Net Worth (2024) $15 Million

Public Service Announcement

ELEVATE YOURSELF

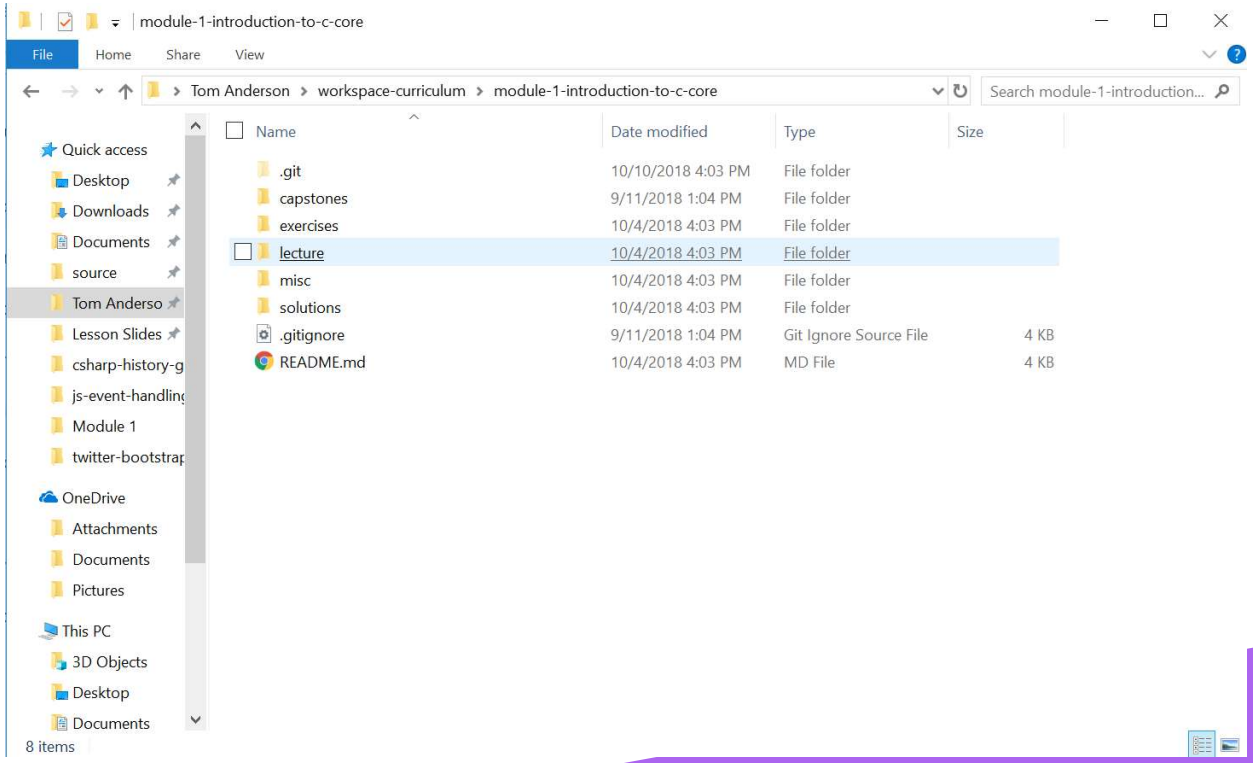
Start with the Basics

Slack: Chat communication

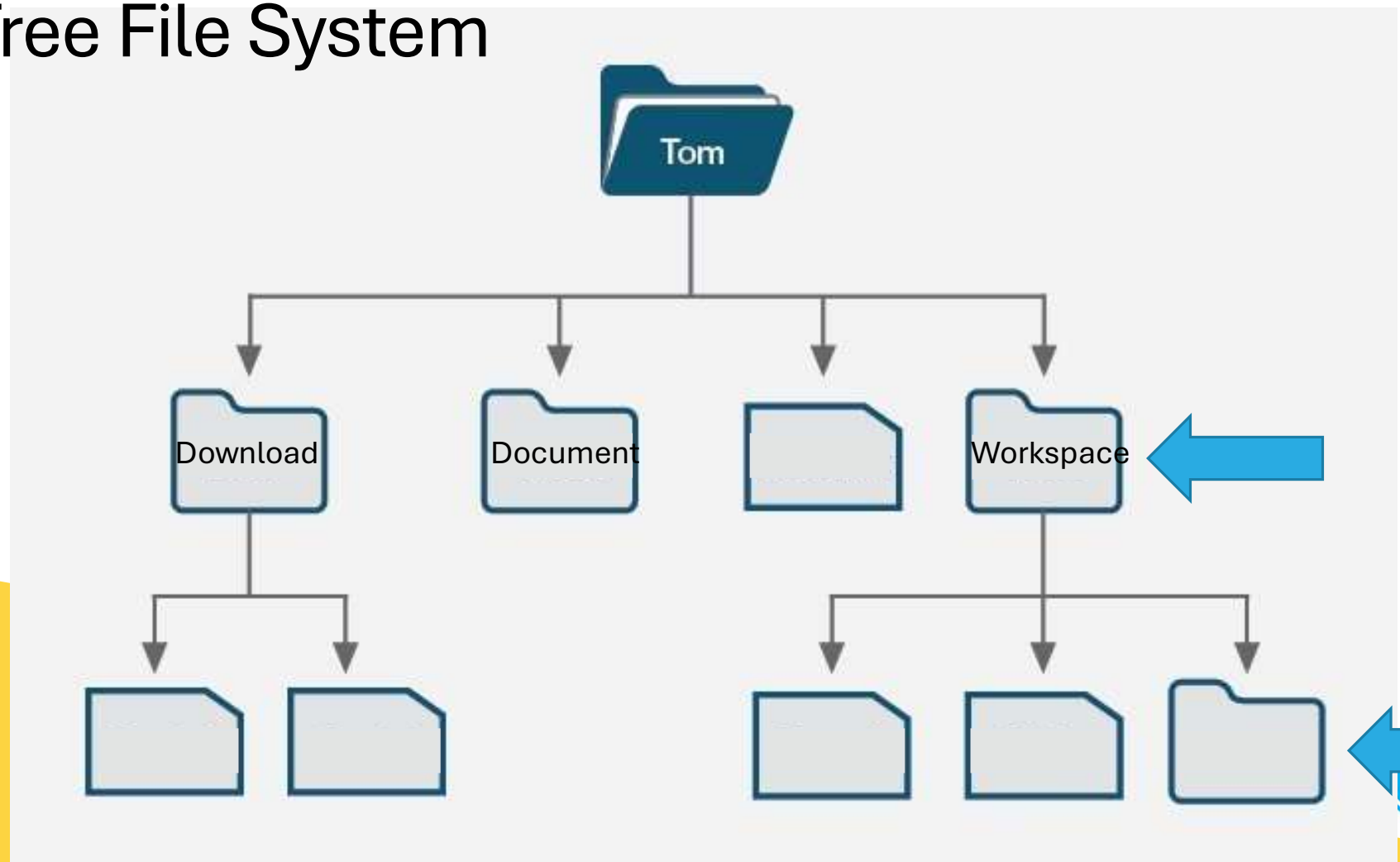
GitLab: Code Repository

Mouse has an off switch

Navigating your computer



Tree File System



File System

- Files are the parts of the file system that contain the stuff we want. Documents, songs, spreadsheets, etc.
- Folders hold other folders and files. All files exist in some folder in the file system.
- All of these objects have metadata that describe them. Things like modified dates, names, and permissions are pieces of data that are attached to files and folders as part of the file system.

Navigating your computer like a developer

```
MINGW64:/c/Users/Student/w

Tom Anderson@Dell-V-2-Multi MINGW64 /c/WINDOWS/system32
$ cd ~

Tom Anderson@Dell-V-2-Multi MINGW64 ~
$ cd workspace/

Tom Anderson@Dell-V-2-Multi MINGW64 ~/workspace
$ cd te-curriculum-may-2022/
✔ ~/workspace/te-curriculum-may-2022 [main|✔]
09:24 $ cd java
✔ ~/workspace/te-curriculum-may-2022/java [main|✔]
09:24 $ ls
final_capstone/  module-1/  module-2/  module-3/  resources/
✔ ~/workspace/te-curriculum-may-2022/java [main|✔]
09:24 $ ls -al
total 28
drwxr-xr-x 1 Tom Anderson 197121 0 May  9 08:20 ./
drwxr-xr-x 1 Tom Anderson 197121 0 May  9 08:20 ../
drwxr-xr-x 1 Tom Anderson 197121 0 May  9 08:20 final_capstone/
drwxr-xr-x 1 Tom Anderson 197121 0 May  9 08:20 module-1/
drwxr-xr-x 1 Tom Anderson 197121 0 May  9 08:20 module-2/
drwxr-xr-x 1 Tom Anderson 197121 0 May  9 08:20 module-3/
drwxr-xr-x 1 Tom Anderson 197121 0 May  9 08:20 resources/
✔ ~/workspace/te-curriculum-may-2022/java [main|✔]
09:24 $
```

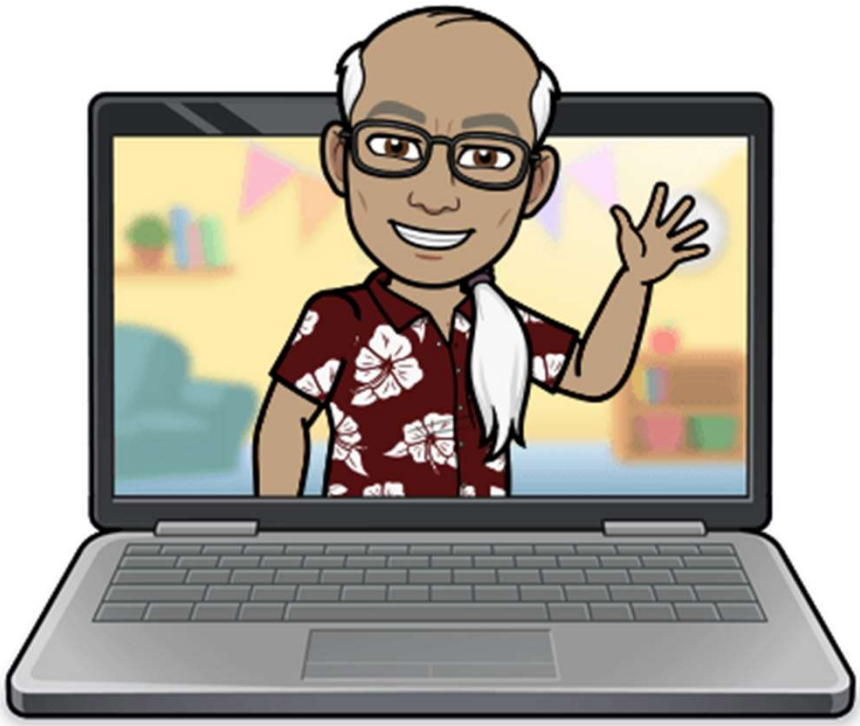
What is a Shell

In a shell, you write lines of code that the computer understands to get the computer to do what you want.

Many tasks in programming are done on the command line because it is more flexible than most GUI interfaces and can be scripted.

We will be using a very popular shell called Git Bash.

LET’S CODE!



Where’s my document?

Version Control

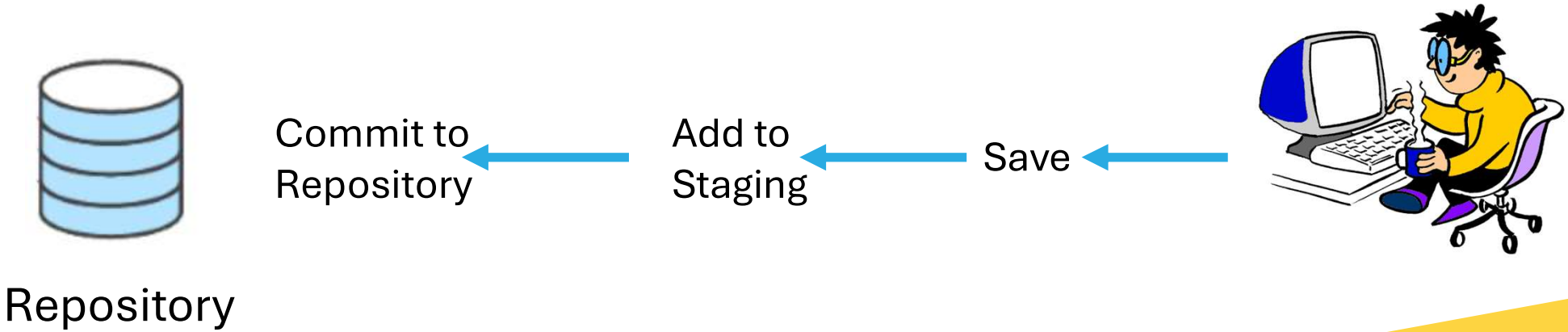
- **Version Control** record changes to a file or sets of files so that previous versions can be recalled at a later point in time.

- **Git** is a distributed version control system that keeps a copy of its changes and file sets in a repository.

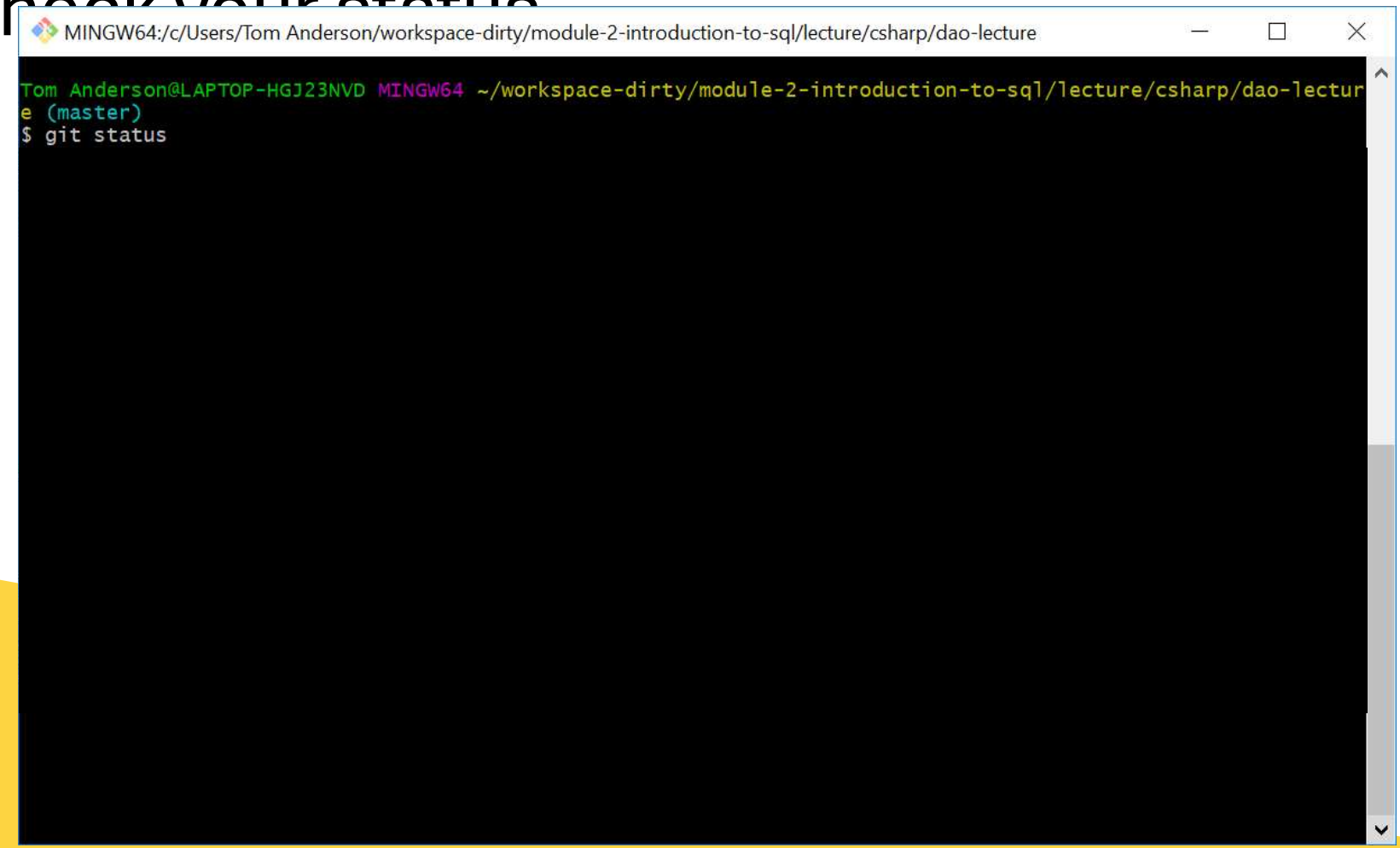
Version Control Process

Repository

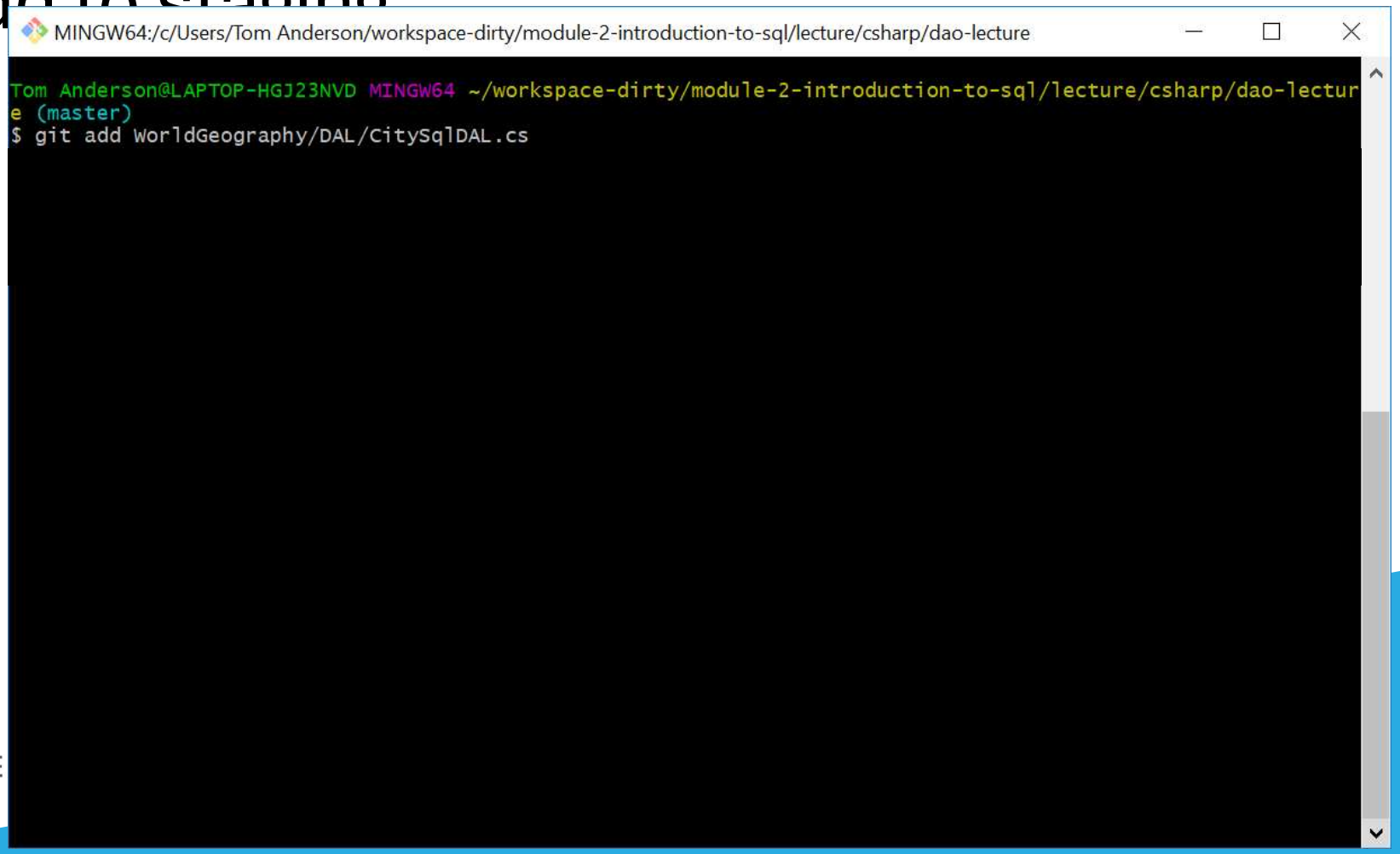
Version Control Process



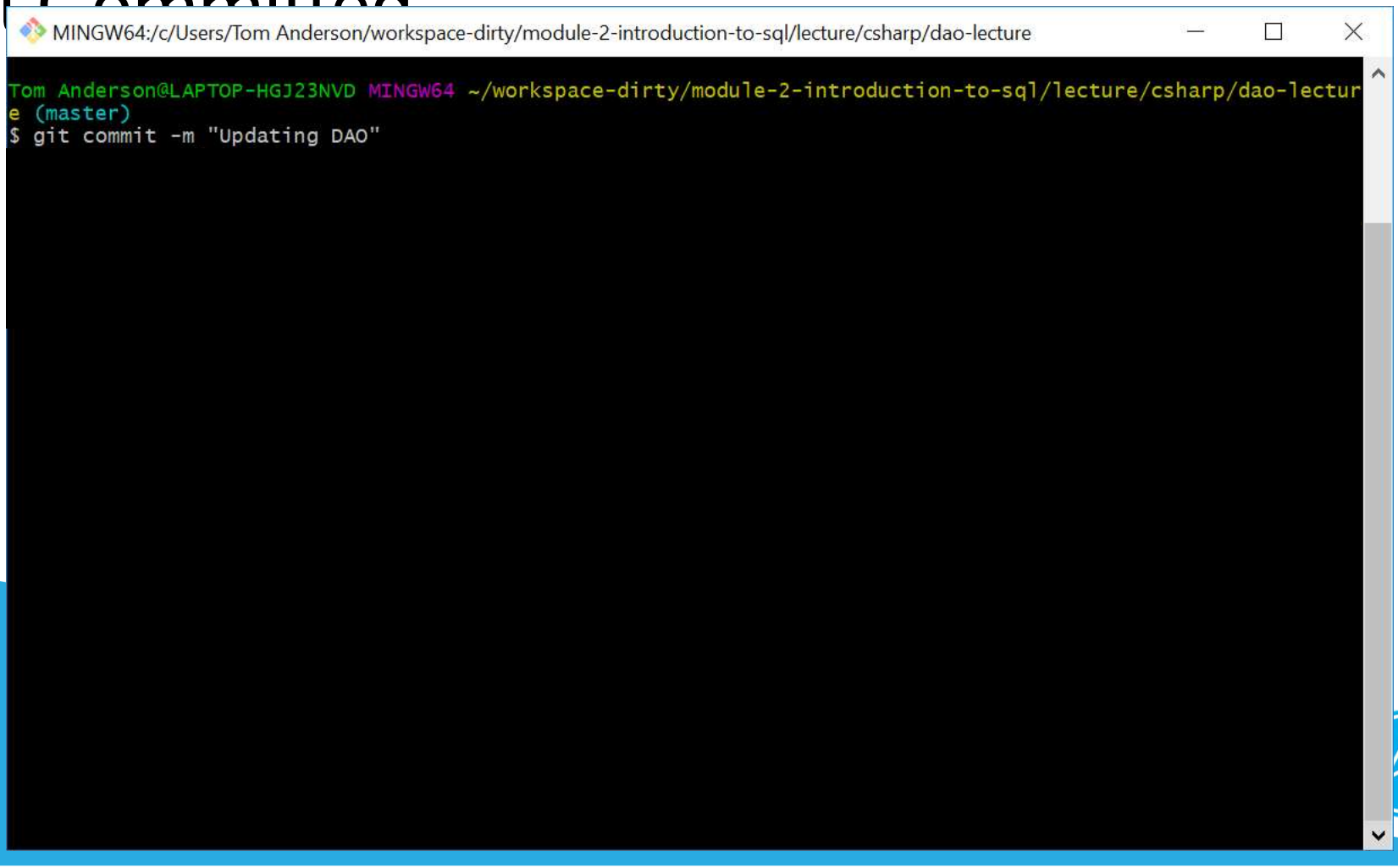
Check your status



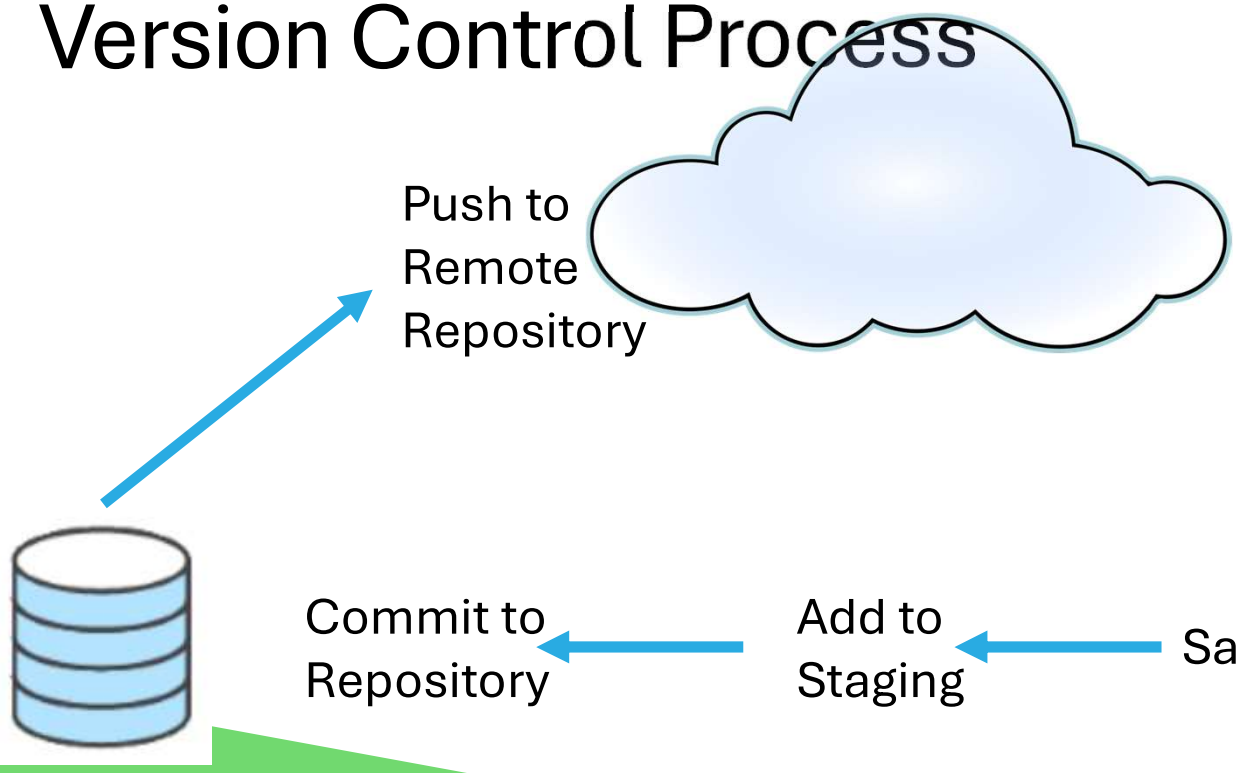
Add to staging



Get Committed



Version Control Process



Git Commands – Your Code

- git status
- git add <filename>
- git commit –m “<message>”
- git pull origin main
- git push origin main

Using Existing Code

- Clone the repository:
  - git clone https://git.techelevator.com/campuses/nlr/jul-2024/java-green/student-code/claudia-carmona-student-code.git

Git Commands – Your Code

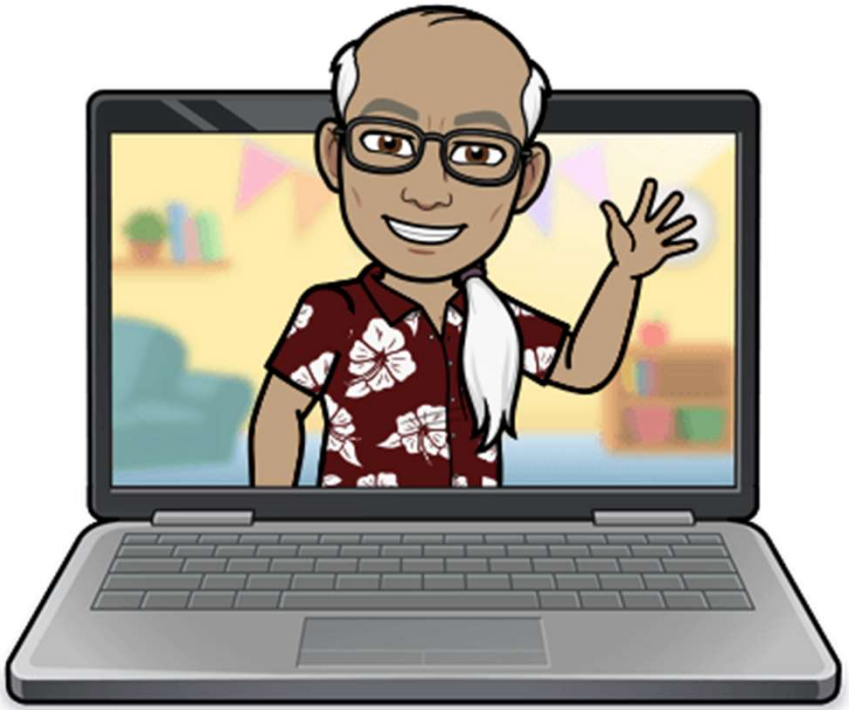
- git status
- git add <filename>
- git commit –m “<message>”
- git pull origin main
- git push origin main
- **git pull upstream main**

origin is an alias for **your** repo
upstream is an alias for the **instructor** code

Configure Git

- Change to your newly cloned directory
  - cd ~/workspace/tom-anderson-student-code
- Execute the script
  - sh ./setup.sh

LET’S CODE!



Tips and Tricks -- Software

- No news is good news. If a message is shown after running a command, read it because it is probably an error. Most commands say nothing on success.
- Press the up arrow to cycle through previous commands instead of retyping
- Use the tab key to automatically complete the path.

Important Class Information

MASTERY AND UNDERSTANDING

- Our exercises focus on **mastery of key concepts**.
- Feedback is provided so you can **know where you need to improve**.
- We expect your average to remain **at or above 2.0.**
- **Any work submitted must be your own**. We may ask you to explain your code to us!
- **Please seek out an instructor or another classmate if you need help!**

3 COMPREHENSION
(≥ 90% tests pass)

2 COMPETENCE
(≥ 50% tests pass)

1 ATTEMPTED
(≥ 25% tests pass)

0 NOT ATTEMPTED
(or cannot compile)

ELEVATE YOURSELF

DUE DATES

Exercises are distributed daily via Git. You submit them by ***pushing your code*** back to Git.

EXERCISES GIVEN…	**ARE DUE…**
Monday	Wednesday 8 AM
Tuesday	Thursday 8 AM
Wednesday	Friday 8 AM
Thursday	Monday 8 AM
Friday	Tuesday 8 AM

Exercises not turned in by the deadline receive a "0". Once the exercise is late, the highest score you can receive is a "2".

LATE ASSIGNMENTS

- **Exercises not turned in by the deadline receive a "0".**
- **Once the exercise is late, the highest score you can receive is a "2".**
- **You can only make up 2 zeroes per module**
- **You can make up as many 1's as you wish**
- **No assignment can be made up after the end of the module (5:00 pm the last Friday)**

(hint: at least make an attempt (25%) at every homework assignment)

Git Commands

- **git status**
- **git add <filename> or git add -A**
- **git commit –m “<message>”**
- *git pull origin main*
- *git push origin main*
- git pull upstream main

Use these multiple times per coding session

Use these when starting or ending a coding session

Use this when I tell you there’s new code

Your Schedule

1. At least by 8:50 Be in class
   You can come in earlier to hang with other students
2. 9:00 Class starts
3. A little review
4. Learn new material
5. Attend Pathway
6. Complete homework
7. Read concept for tomorrow
8. Sleep

OTHER THINGS TO EXPECT

- While we will review many concepts learned during the prework, **we cover a lot of ground**.
- As stated before, **this program can be challenging.** Each day can bring with it a good amount of work. Please make sure that you remain caught up and put in the time with each day.
- Consider this your new **job.** Treat Tech Elevator like a job:
  - be professional
  - finish work on time
  - be prompt
  - be polite.

WHAT QUESTIONS DO YOU HAVE?

Reading for tonight:

Introduction to Tools

Variables and Datatypes