MODULE 1: INTRODUCTION TO PROGRAMMING

Introduction to Tools

Welcome to Tech Elevator!!

How’s it going to feel?

Public Service Announcement

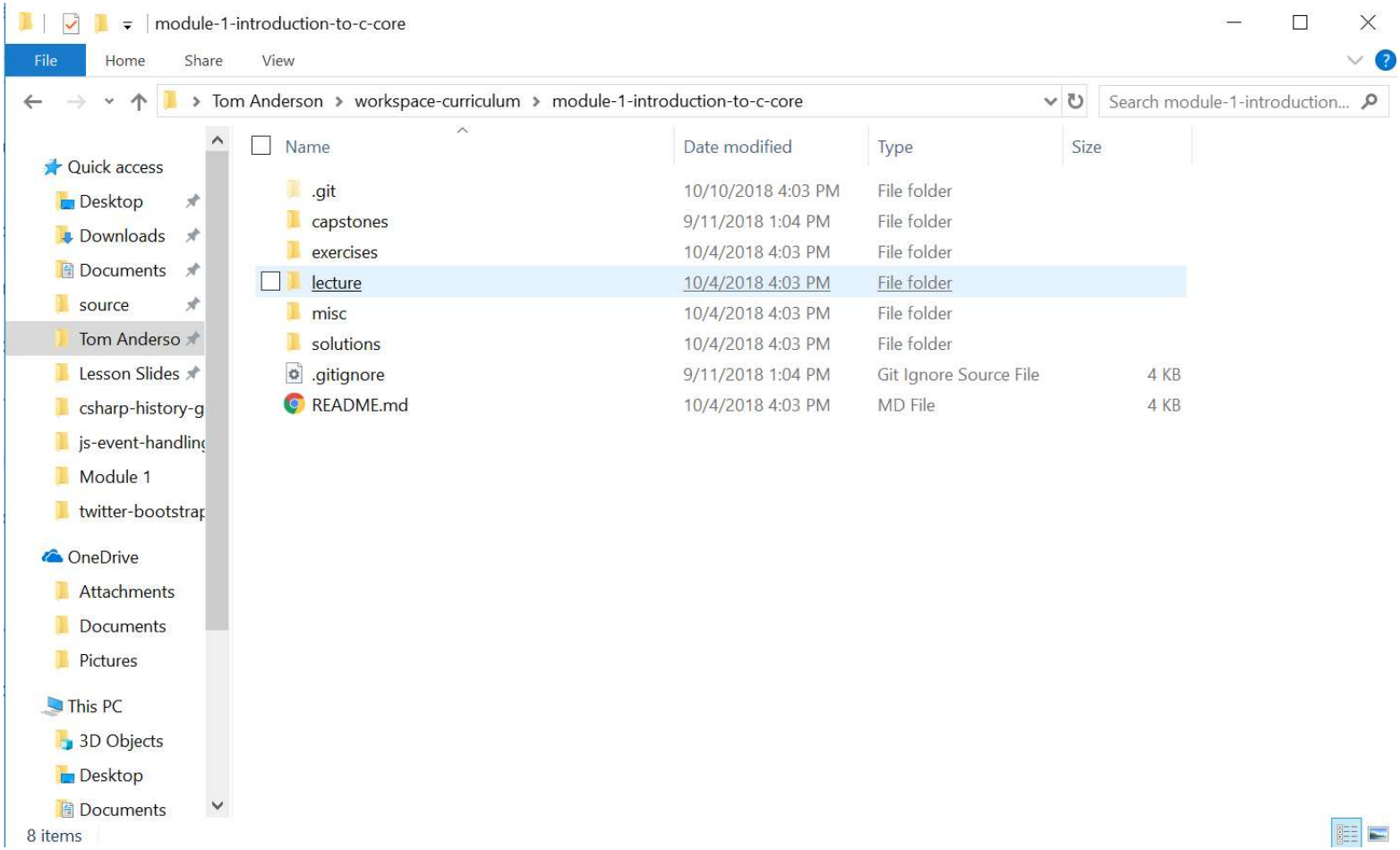
Start with the Basics

- Wifi:
  - SSID: Tech Elevator Guest
  - PWD: TechElevatorPGH901
- Slack: Chat communication
- Bitbucket: Code Repository
- Mouse has an off switch
- https://sites.google.com/techelevator.com/pgh
  - Pathway and Curriculum Calendar
  - Links to textbook, Socrative, Zoom, Dashboard, BitBucket
  - Make sure your textbook is .NET
  - A ton of goodies!
- Sococo is your virtual House of Metal

Sococo


JH
MW
Gates
A Lovelace
Admin
Kleinrock
K Johnson
Knuth
Larryville
Fort Pitt
Elevate Space
Fort Duquesne
Strip District
TOM
Java
Kitchen
TA
.NET
mat
Lounge
Pathway
Bemers-Lee
Shadyside
1-on-1
Roberto Clemente
Torvalds
Andy Warhol
Turing
Rachel Carson
Wozniak
Squirrel Hill
'Sliberty
PITTSBURGH
Mt Washington
Station Square
Kimball

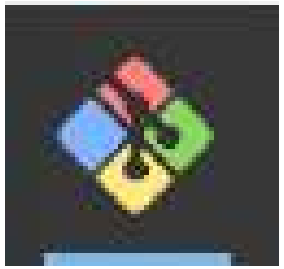
Navigating your computer



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/Tom Anderson/workspace/c-exercises

```
$ cd

Tom Anderson@LAPTOP-HGJ23NVD MINGW64 ~
$ cd workspace

Tom Anderson@LAPTOP-HGJ23NVD MINGW64 ~/workspace
$ ls
c-exercises/  c-lectures/  c-solutions/

Tom Anderson@LAPTOP-HGJ23NVD MINGW64 ~/workspace
$ cd c-exercises/

Tom Anderson@LAPTOP-HGJ23NVD MINGW64 ~/workspace/c-exercises (master)
$ ls
01-introduction-to-tools-exercises/     22-aggregate-functions-exercises/
02-variables-and-datatypes-exercises/   23-joins-exercises/
03-expressions-exercises/               24-constraints-and-transactions-exercises/
04-loops-arrays-exercises/              25-database-design-exercises/
05-command-line-input-exercises/        32-css-selectors-and-layouts-exercises/
06-strings-exercises/                   33-views-part1-exercises/
07-collections-part-1-exercises/        34-views-part2-exercises/
08-collections-part-2-exercises/        36-controllers-part1-exercises/
09-introduction-to-classes-exercises/   37-controllers-part2-exercises/
10-oop-with-encapsulation-exercises/    42-validation-exercises/
12-polymorphism-exercises/              46-js-intro-to-js-exercises/
14-unit-testing-exercises/              47-jquery-library-introduction/
16-tdd-exercises/                       48-twitter-bootstrap-exercises/
17-file-io-part1-exercises/             51-csharp-history-geek-exercises/
21-intro-to-databases-exercises/

Tom Anderson@LAPTOP-HGJ23NVD MINGW64 ~/workspace/c-exercises (master)
$

Tom Anderson@LAPTOP-HGJ23NVD MINGW64 ~/workspace/c-exercises (master)
$
```

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!

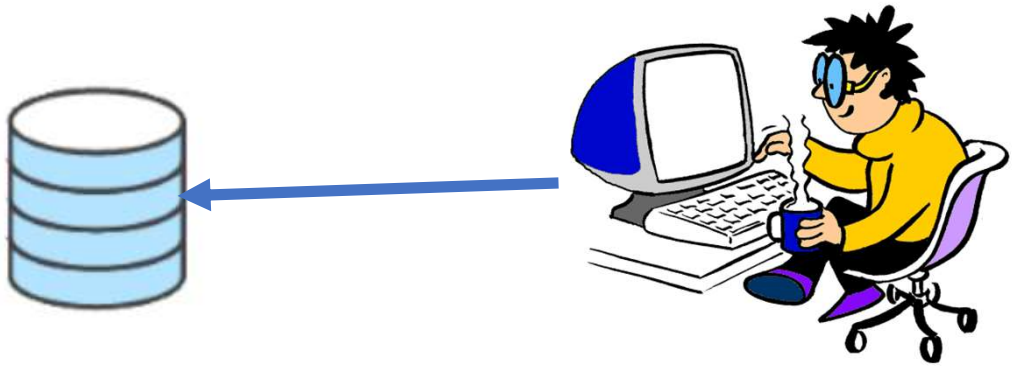
Where’s my document?

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.

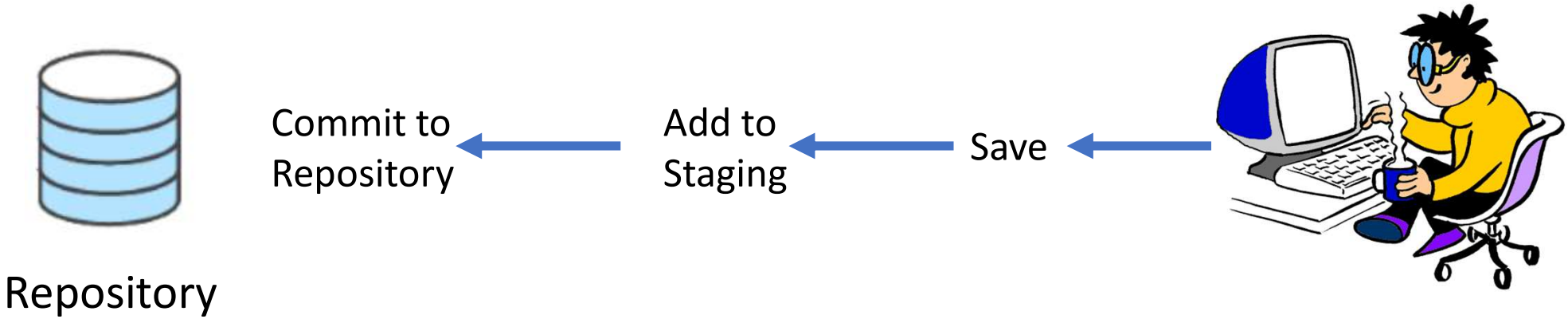
- **Git** is a distributed version control system that keeps a copy of its changes and file sets in a repository.

Version Control Process

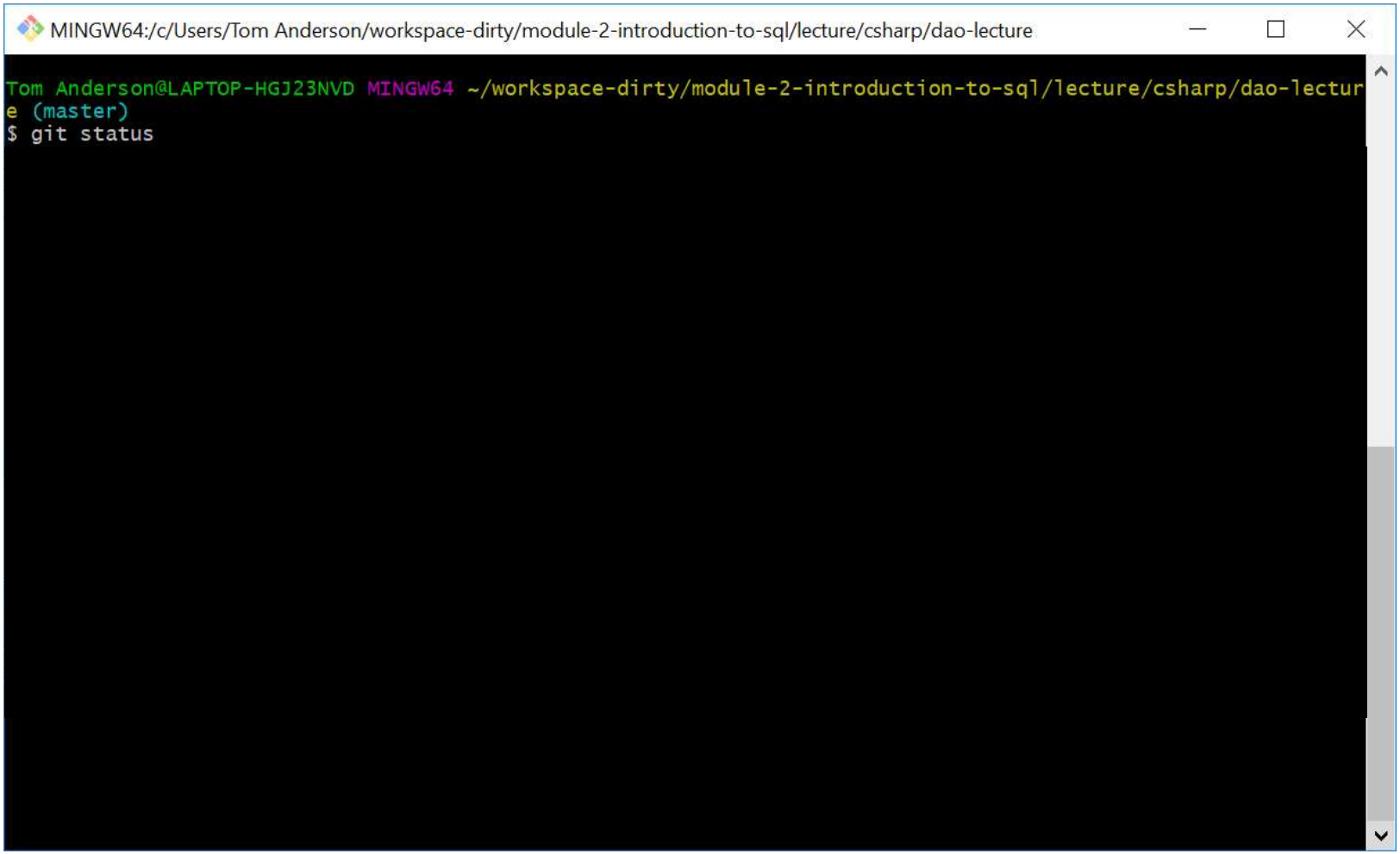


Repository

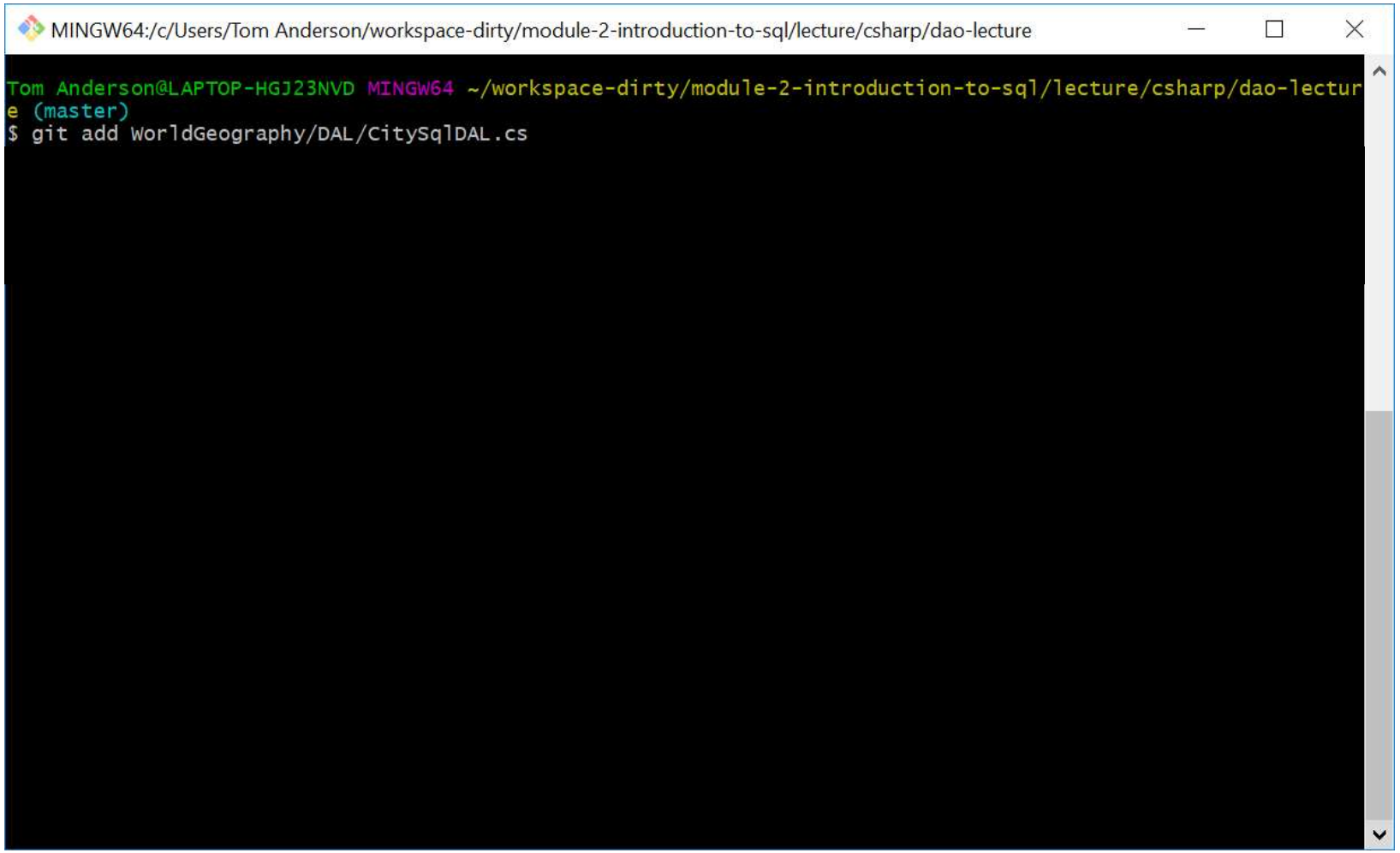
Version Control Process



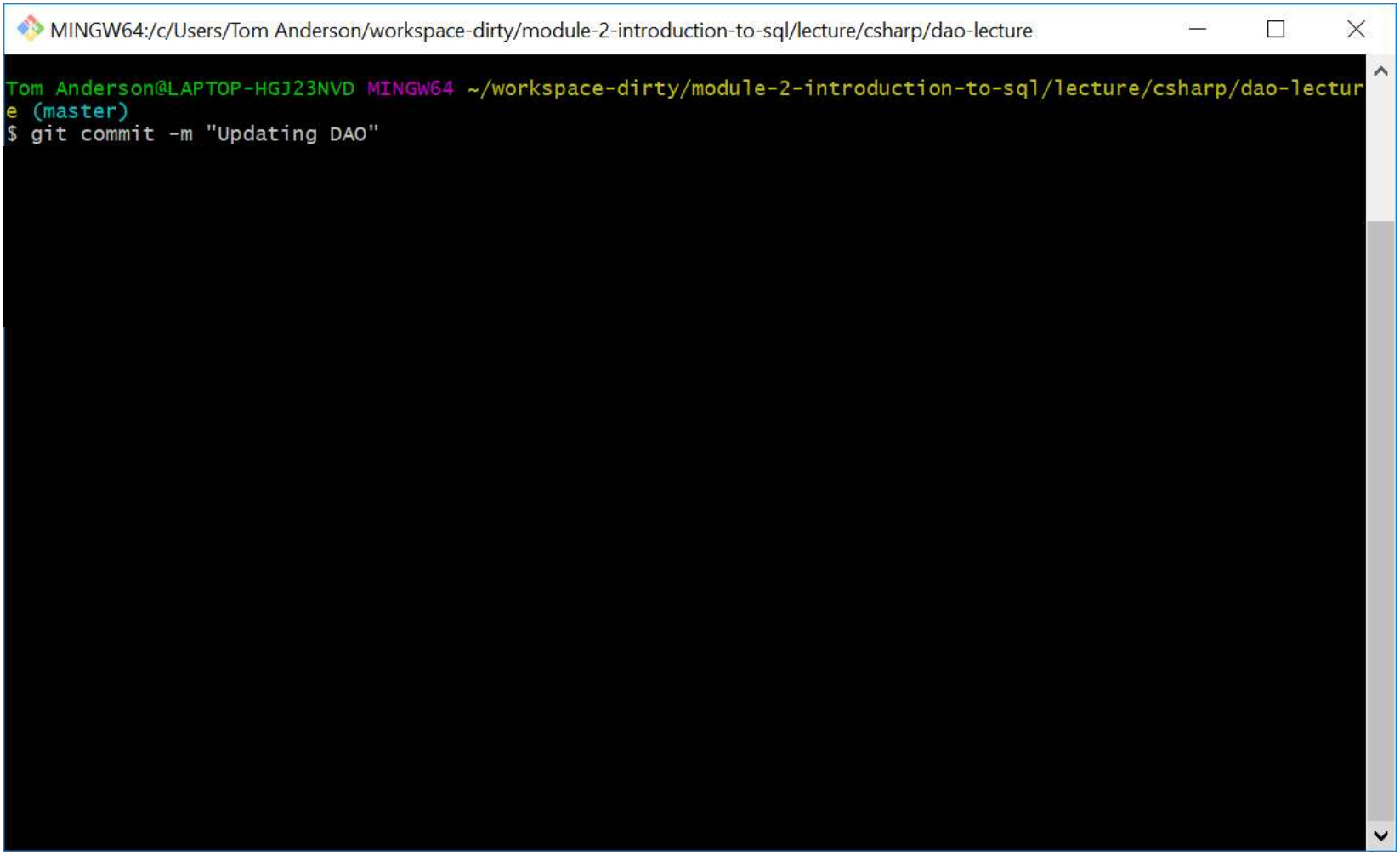
Check your status



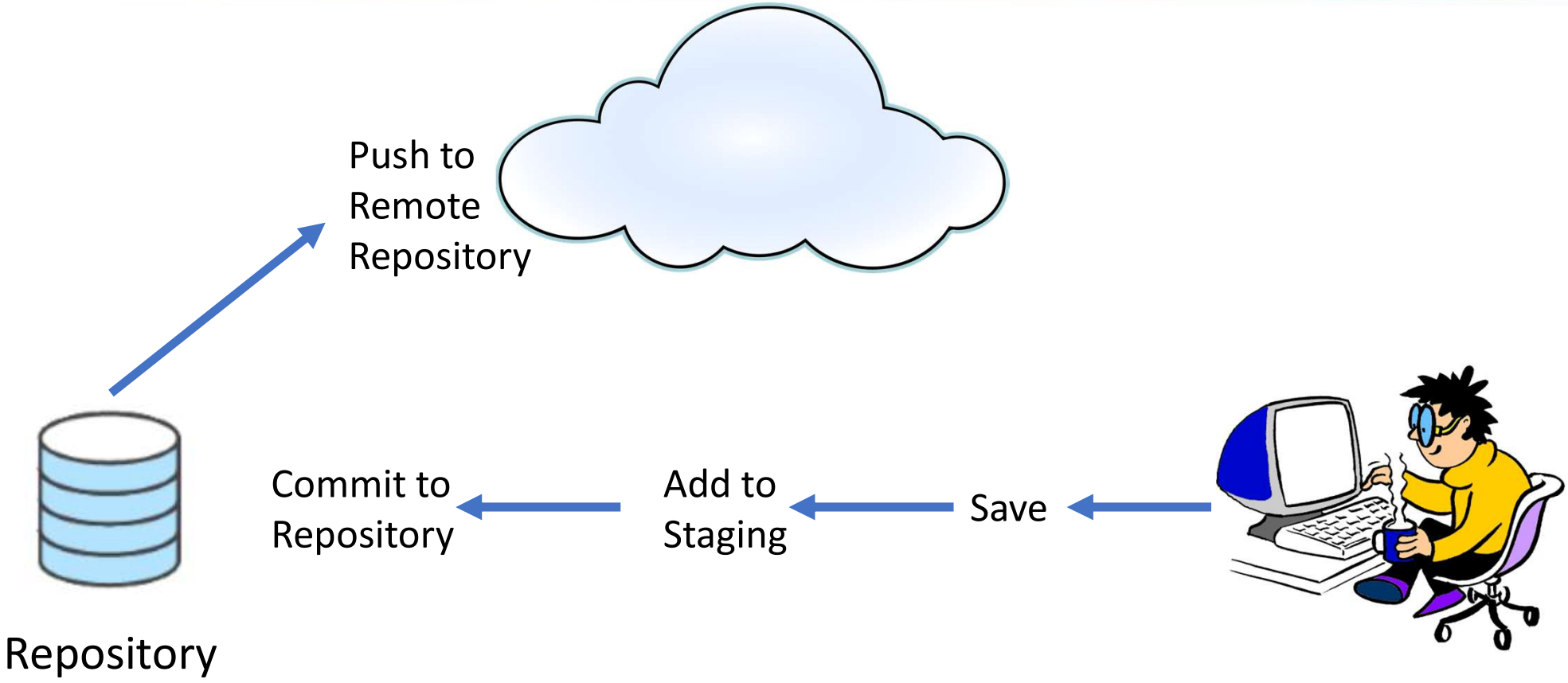
Add to staging



Get Committed



Version Control Process

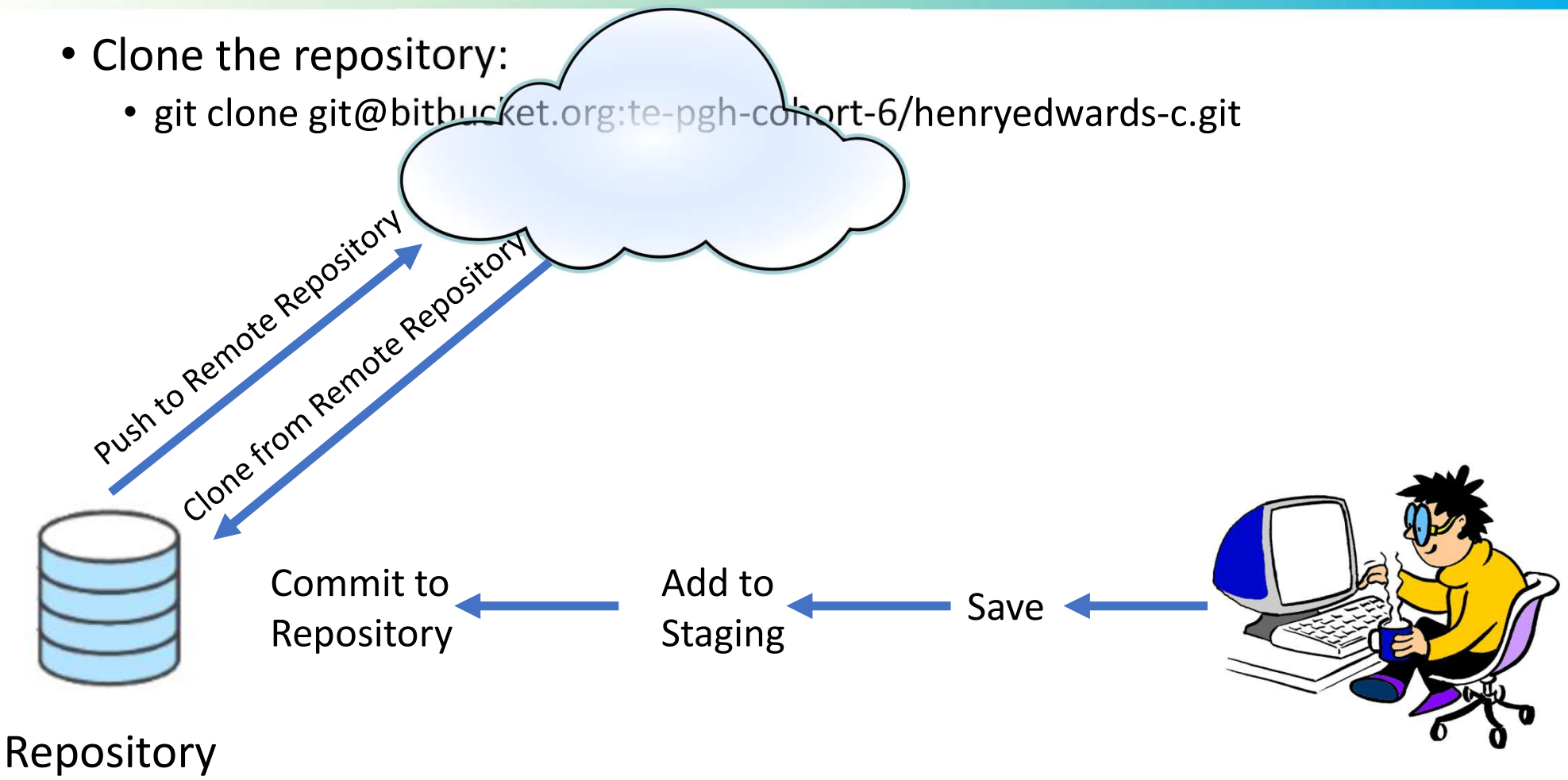


Git Commands

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

Using Existing Code

- Clone the repository:
  - git clone git@bitbucket.org:te-pgh-cohort-6/henryedwards-c.git



Configure Git

- git config --global user.name “Henry Edwards"
- git config --global user.email “henrye@noctivagan.com"
- git config --global core.editor "code -w -n"
- git config --global diff.tool code
- git config --global difftool.code.cmd "code -w -d \$LOCAL \$REMOTE"
- git config --global branch.master.mergeOptions "--no-edit"

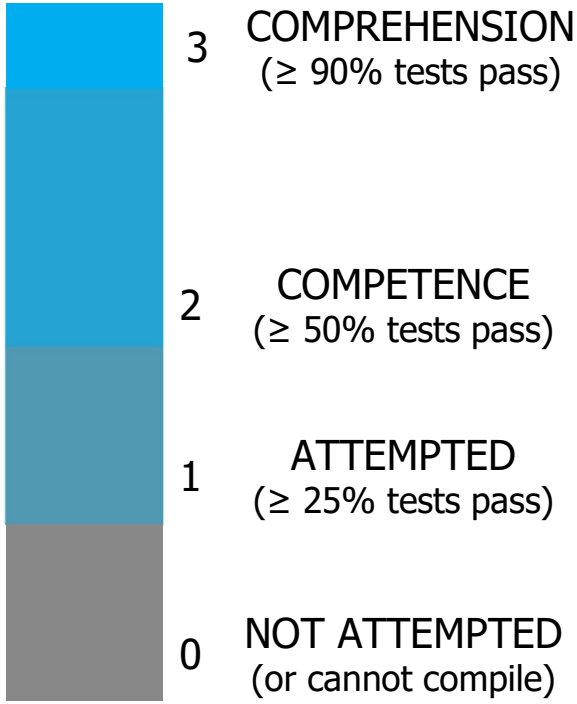
LET'S CODE!

Tips and Tricks

- 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.

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!**



DUE DATES

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

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".

Git Commands

- git status
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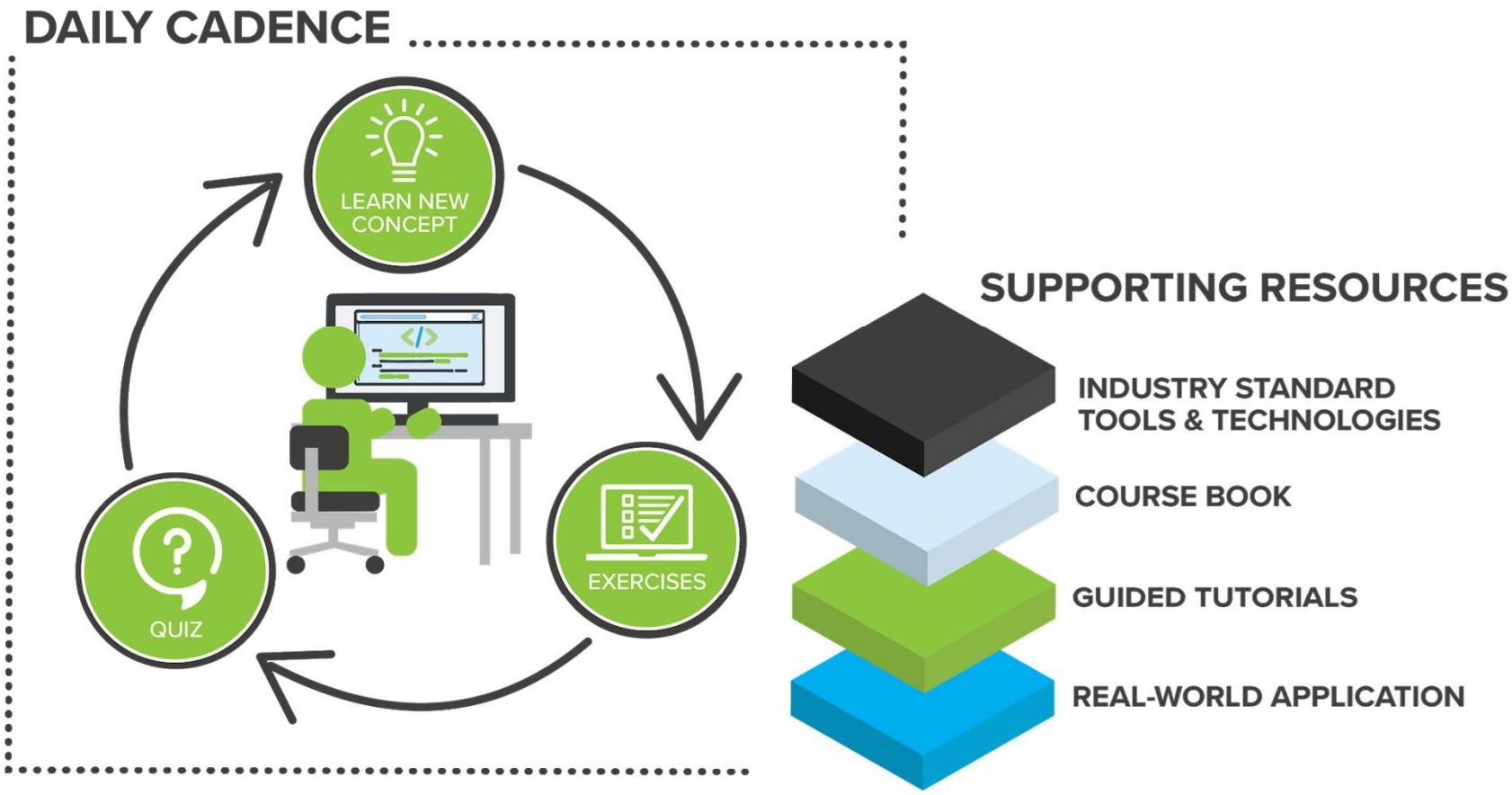
HOW WE TEACH


DAILY CADENCE
LEARN NEW CONCEPT
EXERCISES
QUIZ
SUPPORTING RESOURCES
INDUSTRY STANDARD TOOLS & TECHNOLOGIES
COURSE BOOK
GUIDED TUTORIALS
REAL-WORLD APPLICATION

Your Schedule

1. 8:55 Be in class
   You can come in earlier to hang with other students
2. 9:00 Class starts
3. Take Quiz
4. A little review
5. Learn new material
6. Attend Pathway
7. Complete homework
8. Read concept for tomorrow
9. Sleep

OTHER THINGS TO EXPECT WEEK 1

- 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