Week 1 - Installing & Accessing Software

You will have completed (by 5pm on Monday, March 6th):

1. **Install R & RStudio**

2. **Confirm you can access ArcGIS online through using your NCSU credentials.**

But first, a couple of definitions, so we're all on the same page…

R is a programming language and free software environment for statistical computing and graphics supported by the R Foundation for Statistical Computing. The R language is widely used among statisticians and data miners for developing statistical software and data analysis.

RStudio is an integrated development environment (IDE) for R. It includes a console, syntax-highlighting editor that supports direct code execution, as well as tools for plotting, history, debugging and workspace management.
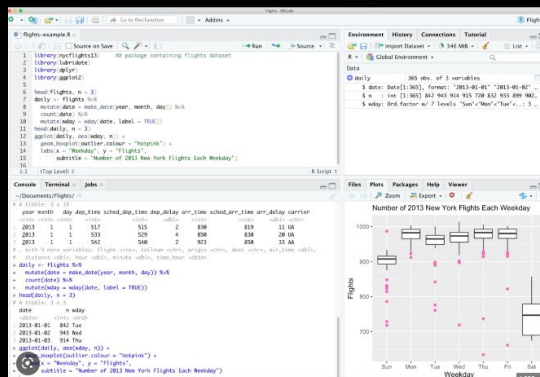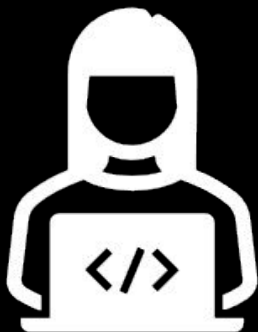
- RStudio is the most common IDE for R, but it is possible to use other IDEs, such as Visual Studio Code. **For consistency in this course, everyone will use RStudio.**
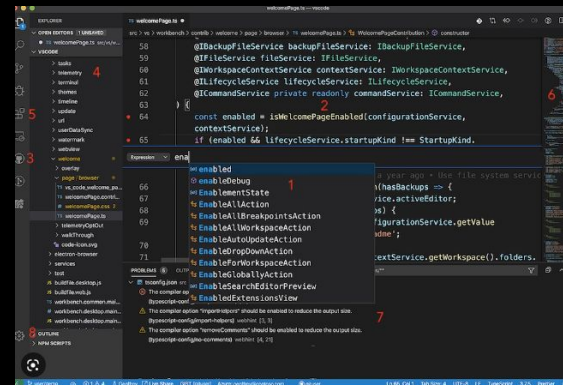
More info on IDEs on the next slide!

What exactly is an IDE (Integrated Development Environment)?

Below are images of different IDEs (note: these are also different Graphical User Interfaces (GUIS)) - there are many kinds of IDEs, and they're all a little different.
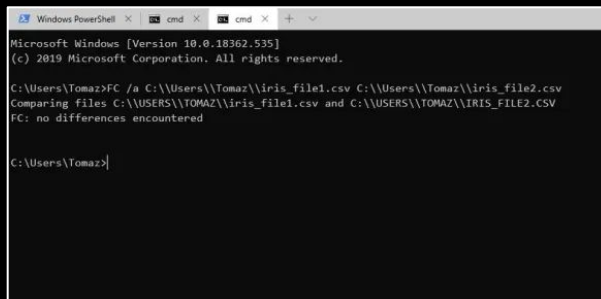
You type code into the IDE (save code, edit code, troubleshoot code, run code, etc.)

RStudio is an IDE built specifically for R.

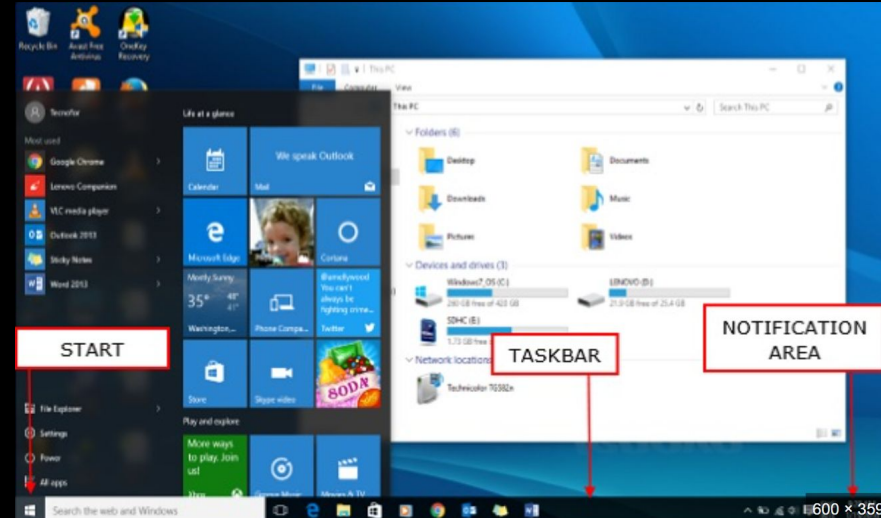If we didn't have IDEs, then working with code would be more like this….bleh.

Another term you've likely heard….

What exactly is a GUI (Graphical User Interface)?

- **The GUI (guːi/GOO-ee)** is a form of user interface that allows users to **interact with electronic devices through graphical icons** and audio indicator such as primary notation, *instead* **of text-based and typed commands.**
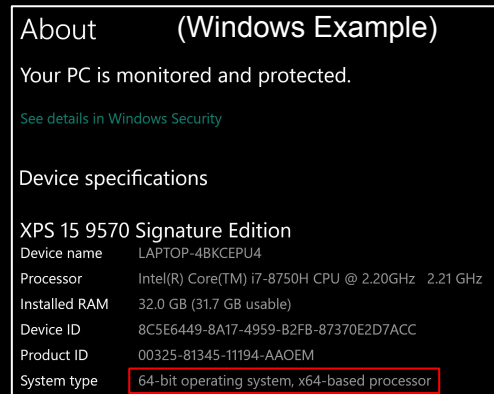
- The term "graphical user interface" (GUI), or simply "graphical interface", refers to a user interface **using mouse, icons, and windows.** When the term was first introduced, it was **in contrast to command line interfaces** and **full-screen character interfaces.**

https://en.wikipedia.org/wiki/Graphical_user_interface
https://www.microfocus.com/documentation/net-express/nx40/gsgint.htm#:~:text=The%20term%20%22graphical%20user%20interface,and%20full%2Dscreen%20character%20interfaces.

Installing R & RStudio

Step-by-step instructions for installing R, here. Do steps 1-13.

- **In step 8,** you most likely have a 64-bit machine. Go to "Settings" on your computer, and go to "About" or "System". This is the type of information you're looking for ⟶

About   (Windows Example)

Your PC is monitored and protected.

See details in Windows Security

Device specifications

XPS 15 9570 Signature Edition
Device name	LAPTOP-4BKCEPU4
Processor	Intel(R) Core(TM) i7-8750H CPU @ 2.20GHz 2.21 GHz
Installed RAM	32.0 GB (31.7 GB usable)
Device ID	8C5E6449-8A17-4959-B2FB-87370E2D7ACC
Product ID	00325-81345-11194-AAOEM
System type	64-bit operating system, x64-based processor

After completing step 13, go here for step-by-step instructions for installing RStudio (skip step 1, installing R). Windows, Mac, & Linux available.

- **Note:** RStudio has recently been rebranded as Posit.

Accessing your NCSU ArcGIS Online Account

1. Go to: https://ncsu.maps.arcgis.com/home/index.html
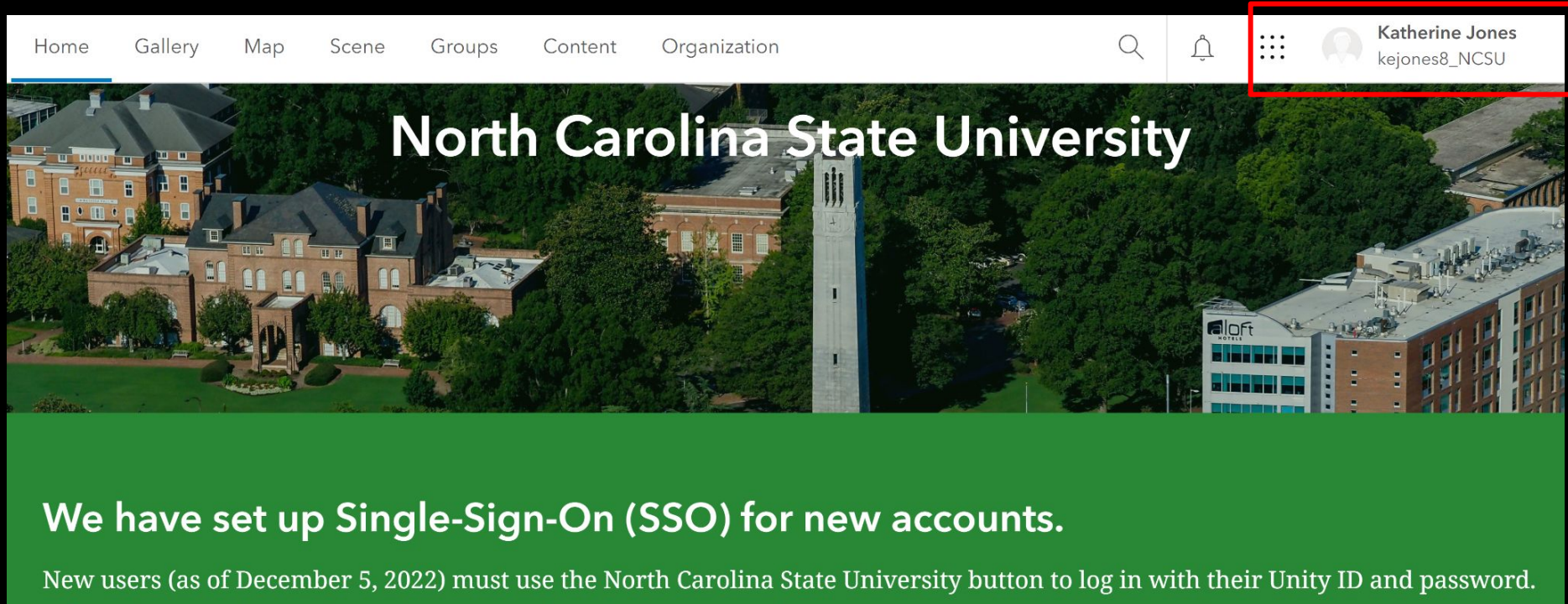
2. Click Sign In

3. If this is your first time signing in to ArcGIS Online via NCSU (after Dec. 6, 2022), you'll choose the blue button (bottom). If you have signed on to ArcGIS online via NCSU before and have data you would like to access, then use the white button (top). **If you have a previous NCSU login, but do not need any data from that account or did not have anything stored there, I would recommend using the blue button (bottom).**

- ● Note: These login steps differ from your previous courses because NCSU changed their ArcGIS online logins at the end of Fall semester (2022).

4. Confirm that you can successfully log in to ArcGIS online using your NCSU credentials (UnityID and password). A successful login looks something like this:

If you are unable to login, please email Kate ASAP.