**Git/GitHub links:**

Here are some [Git desktop apps](https://git-scm.com/downloads/guis) like RStudio's Git app

The [Git Pro Book](https://git-scm.com/book/en/v2) – definitely designed for engineers but may someday be useful

**Group 1:**

Add a file to your repository through the file explorer (i.e., not in RStudio)

* Try to ***Commit/Push*** the change to your repository
  + you should see an error on ***Push*** (section 12 in [Git/GitHub Quick Setup](https://d2l.msu.edu/d2l/le/content/1459992/viewContent/12243559/View)) – this is because I added a chapter to your book (an image of where I will be backpacking in May)
* ***Pull*** my Commit first, then ***Push*** your Commit

Add a user in your breakout group to your repository (section 10 in [Git/GitHub Quick Setup](https://d2l.msu.edu/d2l/le/content/1459992/viewContent/12243559/View))

Send a message to that user using ***Issues*** (section 9 in [Git/GitHub Quick Setup](https://d2l.msu.edu/d2l/le/content/1459992/viewContent/12243559/View))

**RMapping:**

Spherical vs Projected Coordinates

* [helpful webpage](https://www.esri.com/arcgis-blog/products/arcgis-pro/mapping/gcs_vs_pcs/)
* [funny video](https://www.youtube.com/watch?v=jtBV3GgQLg8) (might not be useful but I enjoyed the video!)

The wiki page about [UTM Zones](https://en.wikipedia.org/wiki/Universal_Transverse_Mercator_coordinate_system) – the [simplified view of the contiguous US](https://en.wikipedia.org/wiki/File:Utm-zones-USA.svg) is a helpful image.

**RMapping Terms:**

Coordinate reference system (crs)

Geographic coordinate system

Longitude/Latitude

Projected coordinate system

Northing/Easting

Universal Transverse Mercator (UTM)

* Lansing is in UTM 16N or 16T

Datum

EPSG registry

* 4326
* 29616

**Group 2:**

Fill out the definitions.

What is a datum? Why do we need to use different datums?

What is a false northing/easting? Why is this done?

Put answers in your repository and Push/Commit. In the Commit message, give the file name that has the answers.

**Homework:**

Update Zoom to newest version (5.9.7 as of 3/17/22)

Install all the packages in the two lesson09 script files

In [Git/GitHub Quick Setup](https://d2l.msu.edu/d2l/le/content/1459992/viewContent/12243559/View) lesson (D2L)

Add email notifications on Push for you and [belinsky@msu.edu](mailto:belinsky@msu.edu) (section 8)

Send a message to ***belinskyc*** using ***Issues*** (section 9)

Make some change to your repository and Commit/Push

* Do this after you add email notifications
* make sure your Commit Message is descriptive

Get coordinates for same map