Exercise 1: Getting Started with GEOG653

Overview

This exercise is to help you get prepared for this course in terms of software and basic skills. The specific objectives are:

- Installing Desktop ArcGIS
- Installing ArcGIS Pro
- Getting to Know ArcGIS Online
- Managing files by creating folders
- Finding and downloading files from ELMS
- Zip/unzip files
- Making/editing screen shots
- Submitting files on ELMS as a lab report

Part I: Installing Desktop ArcGIS

In this class, we are going to mostly use ArcGIS Pro. However, we still sometime use Desktop ArcGIS including modules such as ArcMap, ArcScene, and ArcGlobe. In this class, we will be using the latest version – 10.8.

As a student in our MSGIS program, you will be provided with free license for Desktop ArcGIS. You can email to Kristen (kbergery@umd.edu) to get a license code. To download Desktop ArcGIS, you can go to ELMS and then Modules < Week 1.

Besides the software you install on your own computer, you can also access the software from the Computer Labs (Lefrak 1136 and 1138) when it becomes safe to come to campus.

In addition, you can access the software through our dedicated server – VMWare which is basically a cloud where all GIS software and other software such as ENVI have been installed. For instructions on how to use it, you can find the user guide on ELMS.

Part II: Installing ArcGIS Pro

ArcGIS Pro is a new platform that offers some unique and powerful features comparing to Desktop ArcGIS, for example, it integrates 3D environment with 2D. It is clear that ArcGIS Pro is going to take over Desktop ArcGIS in a few years. Therefore, it is important that you become familiar with ArcGIS Pro. In this class, we are going to use the latest version ArcGIS Pro 2.6.

To download ArcGIS Pro, you can go to ELMS and then Modules < Week 1.

As of the license, I have already created a user account for you through our MSGIS ArcGIS Online Organizational Account and also granted the license to you. During the first class, we will test to make sure you have properly installed the software and activated the license.

Part III: Getting to Know ArcGIS Online

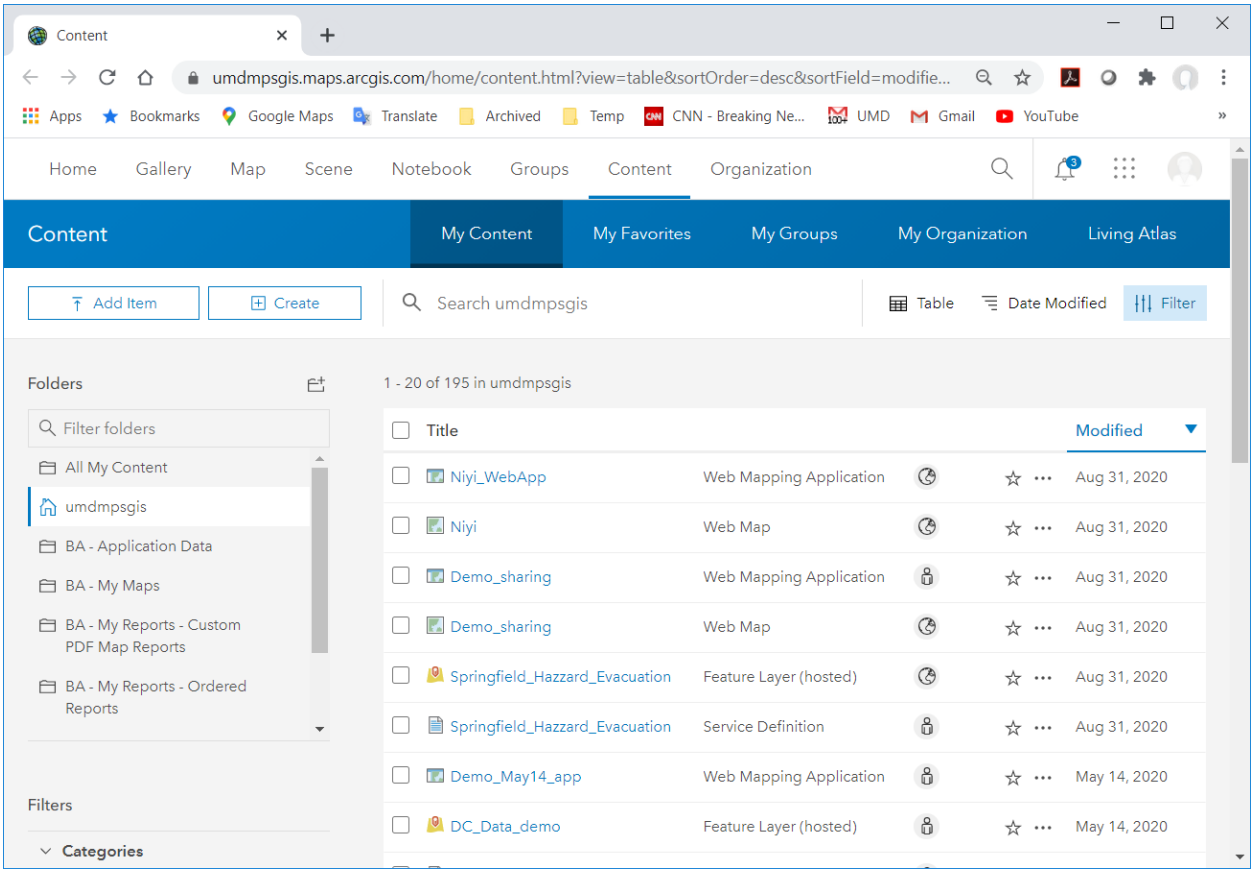
ArcGIS Online is a relatively new GIS platform but has grown much more than just that. It is a complete, cloud-based, collaborative content management system that lets organizations manage their geographic information in a secure and configurable environment.

In this class, we are going to use ArcGIS often because it provides spatial analysis capabilities and avenues. The license for ArcGIS Pro and also apps such as Business Analyst is actually managed through ArcGIS Online which is essentially a portal.

To know more about ArcGIS Online, you may want to refer to these links:

- https://doc.arcgis.com/en/arcgis-online/get-started/what-is-agol.htm
- https://www.esri.com/en-us/arcgis/products/arcgis-online/overview

However, the best way to learn about ArcGIS Online is to use it. I will create a user account for each of you in this class so that you can log in to explore. The log in (id and pwd) is actually the same as the one you use to sign in ArcGIS Pro.



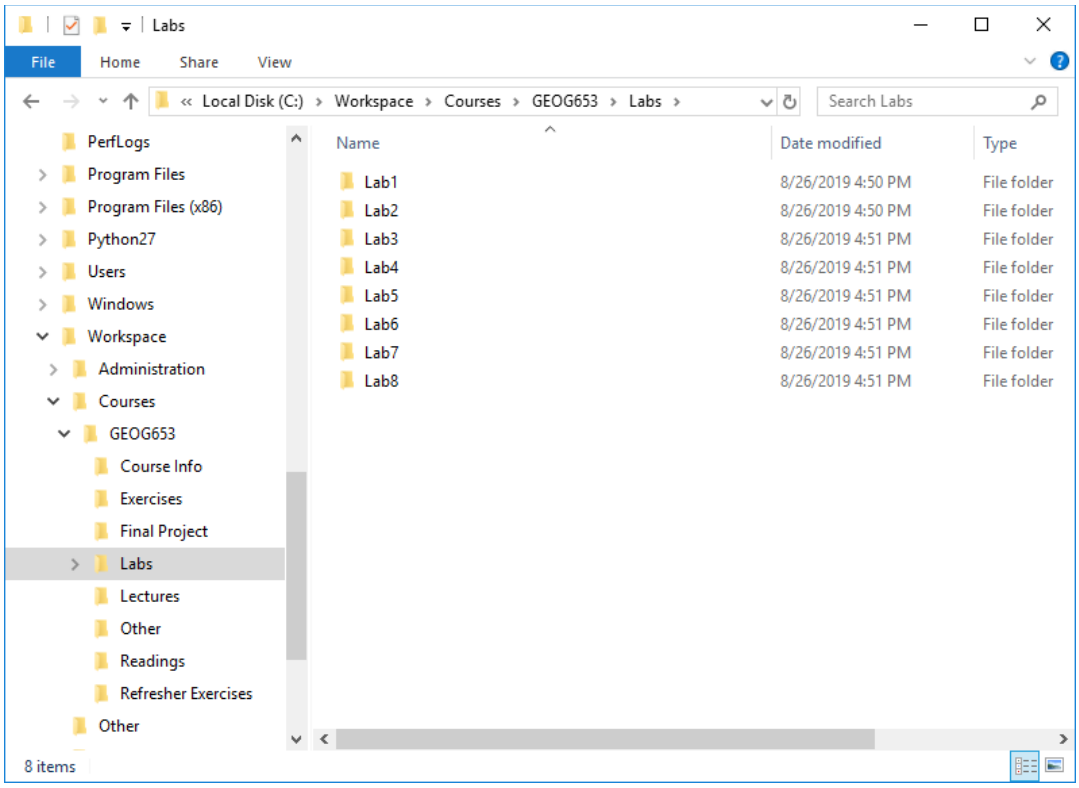
With the ArcGIS Online account, you will be able to do a lot of things:

- Explore a web map in ArcGIS Online
- Create an ArcGIS personal Account

- Modify and save a web map
- Add layers to a web map
- Embed a web map
- Make a web application
- Publish a map as a web app
- Add data interactively

Part IV: File/Folder Management

1. Open Windows Explorer
2. Navigate to the drive on your computer where you will store all files that are related to GEOG653
3. Create various folders as shown in the image below.



4. **Important!** It is critical that you will always name the files or folders by following the rules listed below.
   - Do not use spaces, dashes or other strange characters in file/folder names. Underscore "_" is fine.
   - The first character in the name should be a character and must not be a number.
   - Make the file/folder names concise and descriptive.
   - Use names that make sense to you and easy to remember.

Part V: Zip/Unzip Files

Using GIS often involves a lot of data (i.e. files). Such files can be very large in terms of file size. Furthermore, a single dataset always is composed of many individual files. Therefore, it will be very helpful to compress/zip files into a folder during transferring. Note that sometime you will need to use specialized Zip/Unzip software to convert data downloaded from Internet.

For now, you will need to know the most basics.

1. Go to Assignments > Exercises > Ex1.
2. Download Ex1 data file (zipped) and saved it to your workspace in the appropriate folder that you created earlier
3. Select this file and then right-click on it.
4. Then follow the instructions to unzip the folder.
    a. Again, sometime you need to use specialized software to be able to unzip a file/folder. For example, ".gz".
5. Note that the data file name is not very good because there are spaces and uncommon characters (e.g. &). So, you need to rename the data file so that it follows the rules mentioned earlier.

Part VI: Make/Edit Screen Shots

It is often said that an image is worth of thousands of words. And it is definitely true in this class. For the exercises and lab assignments, you are often required to include images (screenshots or maps) in the report. Once I see those images, I would know whether or not you finished the tasks and also tell if the answer is right or wrong. Therefore, you must have some basic image processing skills.

1. After you unzipped the folder at previous step, you will expand the folder which saves those extracted files.
2. Make a screen shot of this folder displayed in Windows Explorer.
3. Create a Word document and insert this image (screenshot).
4. Save this Word document file and name it "**Ex1_X_Y**". (X is your first name and Y your last name). This document is actually your Exercise #1 report.

Part VII: Submit Exercise/Lab Reports through ELMS

We are going to use ELMS extensively in this class. Not only will I post everything (lecture slides, exercise and lab documents as well as data), but also you will need to submit your exercise/lab reports through ELMS.

1. Log in at http://elms.umd.edu
2. On the website for GEOG653
3. Go to Assignments > Exercises > Ex1
4. After you completed your exercise/lab report, click on the link to Ex1 and it will allow you to submit the report directly to the TA and instructor for reviewing.

----- THE END -----