**Student Name:** **Weight: 5%**

**Student ID:** **Marks: /18**

Assignment 1: Python Fundamentals

# Purpose

The purpose of this assignment is to write a program using high-level programming (HLP) language. You will use various Python commands for file and directory management, which are important components of managing geographic information system (GIS) data and information.

This assignment is an individual effort.

## Creating Directories or Folders

In Part A, you will write a script to create one or more directories based on names that the user will be asked to enter. Assume that this script will be executed in IDLE and the directories will be created in the following location: **D:\GEOS455\Assign1**. To create the directories, use the **mkdir** Python command.

# Instructions

## Creating Directories or Folders

1. Ask the user to name the main folder at the following location: **D:\GEOS455\Assign1**.
2. To adhere to proper data management structures, ask the user to create three subfolders: one for data storage, one for .mxd storage and one for data output storage.
3. Ask the user to respond with “Yes” or “No” as to whether they would like to add another subfolder.
4. If the response is “No,” then create the folder with the name entered by the user. Inform the user that the folder was successfully created.
   1. Quit the execution of the script.
5. If the response is “Yes,” then ask the user to name the new folder they wish to create.
6. If the response is anything other than “Yes” or “No,” repeat the question until the user has entered either “Yes” or “No.”
7. Repeat the process, starting with step 2, until the user enters “No.”
   1. Before exiting the script, inform the user that the folders have been successfully created.

## Challenge – Copying Folders

In Part B, you will write a script to copy the folders created in Part A, which will create a replica of these folders for use as a working directory. Assume that this script will be executed in IDLE and the directories will be created in the following location: **D:\GEOS455\Assign1**, but in a new folder.

1. Create a new main folder called “Working.”
2. Copy all folders created in Part A into the newly created “Working” folder.
3. Append **“\_working”** to all folders and subfolders created in Part A.
4. Inform the user that all folders have been successfully copied to the “Working” folder.

# Assignment Deliverables

Submit the deliverables outlined below in a zipped folder to Brightspace. Use the following naming convention:

**<Last Name>\_Assign<Assignment #>\_GEOS456.zip**

**Example: JohnstonStewart\_Assign1\_GEOS456.zip**

## Format & Content

Submit the assignment to your instructor in digital format. The required components for document submission are:

1. Python script
   1. Author, date and script purpose must be included at the top of the script
2. Comments in the script
3. Any applicable references as comments in the script

### Due Date

Refer to the course schedule. Late assignments will not be graded.

# Assignment Assessment

Refer to the marking criteria below.

**Note:**

* It is expected that all assignment reports will be grammatically correct.
* Although it is understood that you will collaborate with each other to achieve objectives, assignment submissions must be unique in content and approach. If this is not the case, then the Academic Dishonesty policies will be enforced.
* Proper citation of referenced material must be provided. If this is not the case, the Academic Dishonesty policies will be enforced.

# Marking Criteria

|  |  |
| --- | --- |
| **Part A – Creating Directories or Folders** |  |
| * Script responds to user prompts to continue or not | / 2 marks |
| * Directories or folders successfully created | / 2 marks |
| * User informed that the folders were successfully created | / 2 marks |
| * Required comments and references present | / 2 marks |
|  |  |
| **Challenge – Copying Folders** | / 2 marks |
|  |  |
| **Total** | **/ 8 marks** |