

PGEO6050 – Programming for Geospatial Applications [SP17]

Working with Functions – 30 points

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1. Introduction

In this exercise, you will use all the concepts learned in this class. You are receiving a file containing the three-dimensional coordinates of 1,000 points. You will need to process this data using Python programming language. Upon inspection of the data received, your supervisor has identified a problem with the data. He/She has noticed that the Z-coordinate needs to be offset by 2.00 meters (two meters need to be added to all Z-coordinate values). So, your supervisor asked you to generate another file with the corrected coordinates.

2. Developing pseudo-code [10 points]

Based on the examples already provided to you, develop a pseudo-code, containing the steps necessary to correct the raw-coordinates. Please type your pseudo-code in a text editor (Notepad, Microsoft Word, etc).

3. Writing and testing the code [10 points]

Translate the pseudo-code into Python code. Make sure to check your results. Did you get the expected results? How could you check?

4. Converting part of your code into a function [10 points]

Once you are confident that your code is generating correct answers, convert part of your code into a function to facilitate re-usability. Your function should take as arguments: name of existing file, name of new file, and offset value. Nothing should be returned.

6. Notes

- a) This assignment should be uploaded to D2L.