

Lesson 5: Reading and Writing to Text Files, and Lists and Dictionaries

Download the Lesson5.zip file from the course webpage. Unzip the folder to begin.

Assignment 5a: Write a script that splits a string into objects and writes it to file

- Complete the lesson5a.py script so that it does the following:
 - Opens a new text file in the write mode.
 - Makes a string variable from a list of characters (shapefiles listed)
 - Converts the string variable to a list variable, splitting on the “,” delimiter.
 - Writes each item in the list to the output file on separate lines.
 - Closes the file.

Assignment 5b: Write a script that reads in a text file and writes out to a text file

- Complete the lesson5a.py script so that it does the following:
 - Opens the nests2005_coords.csv file in read mode.
 - Opens a new text file to write to, called “nests2005_format.txt.”
 - Reads the entire inFile.
 - For each line in the inFile, parses it using the split method so that each word (separated by a comma) is assigned to a new variable.
 - Write out the value for each variable to the new textfile, so that it is formatted as depicted below:

```
Siteid: 1
Condition: good
X coordinate: 433207.8362
Y coordinate: 4518107.044
```

```
Siteid: 2
Condition: good
X coordinate: 433080.8662
Y coordinate: 4513751.84
```

```
Siteid: 3
Condition: poor
X coordinate: 434979.4216
Y coordinate: 4517649.372
```

```
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```

Assignment 5 Challenge: Write a script that calculates new x,y coordinates from the coordinates in the input file, and writes them to a new file.

Assume that each of the points in the nests2005_coords.csv file is the center point of a square-shaped plot that is 20 meters by 20 meters. Write a script that takes the coordinate pairs from nests2005_coords.csv and calculates the ll, lr, ur, ul, coordinate pairs based on the center coordinate pair and outputs the 4 new coordinate pairs for every center coordinate pair to a new text file.