CS 224 Introduction to Python | Spring 2019

Closed Lab 5

University of Wisconsin – La Crosse | *March 27*

Description: A bad day in the mountains is better than a good day just about anywhere else. Unless you fall off of the mountain. But that's not really a bad day, that's a really, really terrible day. So let's assume that you don't fall off of the mountain. In that case, mountains are the bees knees. So for this assignment, you are going to create a Python class called `Mountain`. A mountain has the following instance attributes:

Attribute	Type
name	string
elevation	integer
prominence	integer
latitude	tuple
longitude	tuple
climbed	boolean

`climed` is initially `False` for all instances. In addition, the `Mountain` class has a class variable called `num_mountains`. The class should live in a file called `mountain.py`.

Your class also needs some methods. Below is a list:

- `__init__` creates a `Mountain` instance

- `__del__` does required housekeeping when an instance is deleted
- `print` pretty prints a mountain instance
- `is_higher` takes an additional mountain as a parameter. Returns `True` if the distinguished parameter has a higher elevation than the second parameter, `False` otherwise.
- `climb` sets the `climbed` attribute to `True`.

When your class is complete, create a file called `mountain_driver.py`. In this file, write a program that creates a list of `Mountain` instances. The list is called `swiss_mountains`. Your program will read the contents of the file `mountains.txt`. Each line of the file contains the relevant data for one stunningly beautiful hunk of granite. Populate the list with the mountains and test all of the methods in the class.