

Computer Science 1001
Lab Problem #6
Due Nov 6th (11:59pm NL time)

- Your solution to this lab problem should be uploaded to the **Lab Problem 6** dropbox on the course Brightspace shell.
 - Name your files `parks.py` and `parks_test.py`.
 - The dropbox for this lab problem will close at 11:59pm NL time on November 6th. Late submissions will not be accepted.
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1. (a) Parks Canada wishes to keep a list of all the Provincial parks in Canada along with information about each park that may be useful for tourists. In a file called `parks.py`, write a Python class definition, called `Park`, with the following private attributes:

- name of the park
- location (the province where the park is located)
- area covered (in km²)
- year established
- a per-day entry fee

Your class should include a class variable `noOfParks` that keeps track of the total number of `Parks`, as well as the following methods:

- an initializer method that includes parameters to initialize all instance variables
- a mutator method for the area covered
- accessor methods for all attributes
- a `getEntryFee` method that, given a number of days, computes the entry fee for the park based on the per-day entry fee
- a special method `__str__` to return a string showing all attributes of the `Park` object, appropriately labelled.

- (b) In a file called `parks_test.py`, test your class definitions created above as follows:

- create 3 `Park` objects;
- print the `Park` objects;
- print the cost of visiting each `Park` above for some number of days;
- change the area of one of the `Parks`;
- print only the park name and the updated area of the `Park` for which you changed the area, with appropriate labels;
- using your class variable, print the number of `Park` objects created.

Sample output:

Park name: Big Park
Location: NL
Area covered (km²): 200
Year established: 1950
Entry fee per day: \$5

Park name: Small Park
Location: ON
Area covered (km²): 150
Year established: 1980
Entry fee per day: \$6

Park name: Medium Park
Location: BC
Area covered (km²): 165
Year established: 1992
Entry fee per day: \$10

Cost for 2 days in Big Park is \$ 10.00

Cost for 4 days in Small Park is \$ 24.00

Cost for 7 days in Medium Park is \$ 70.00

Park name: Big Park
Updated park area: 400

The total number of Parks is 3