week1_assessment

June 28, 2020

You will use the values of what you find in this assignment to answer questions in the quiz that follows. You may want to open this notebook to be displayed side-by-side on screen with this next quiz.

1. Write a function that inputs an integers and returns the negative

```
In [2]: # Write your function here
        def neg_int(x):
            y = -x
            return y
```

```
In [4]: # Test your function with input x
        neg_int(4)
```

```
Out[4]: -4
```

2. Write a function that inputs a list of integers and returns the minimum value

```
In [5]: # Write your function here
        def min_lst(lst):
            current_min = lst[0]
            for element in lst[1:]:
                if element < current_min:
                    current_min = element
            return current_min
```

```
In [10]: # Test your function with input lst
         min_lst([-3, 0, 2, 100, -1, 2])


         # Create you own input list to test with
         min_lst([-3, 0, -2, -100, -1, 2])
```

```
Out[10]: -100
```

Challenge problem: Write a function that take in four arguments: lst1, lst2, str1, str2, and returns a pandas DataFrame that has the first column labeled str1 and the second column labaled str2, that have values lst1 and lst2 scaled to be between 0 and 1.

For example

```
lst1 = [1, 2, 3]
lst2 = [2, 4, 5]
str1 = 'one'
str2 = 'two'

my_function(lst1, lst2, str1, str2)
```

should return a DataFrame that looks like:

	one	two
0	0	0
1	.5	.666
2	1	1

```
In [15]: import pandas as pd
         import numpy as np


         def my_function(lst1, lst2, str1, str2):
             df = pd.DataFrame({str1: lst1, str2: lst2})
             return df
         my_function([1, 2, 3],[2, 4, 5],'one','two')

Out[15]:    one  two
         0    1    2
         1    2    4
         2    3    5

In [18]: # test your challenge problem function
         import numpy as np
         import pandas as pd

         lst1 = np.random.randint(-234, 938, 100)
         lst2 = np.random.randint(-522, 123, 100)
         str1 = 'one'
         str2 = 'alpha'

         def my_function(lst1, lst2, str1, str2):
             df = pd.DataFrame({str1: lst1, str2: lst2})
             return df
         my_function(np.random.randint(-234, 938, 100),np.random.randint(-522, 123, 100),'one'

Out[18]:     one  alpha
         0    51   -494
         1   218   -140
         2  -216   -398
         3   790     38
         4   516   -288
```

5	253	-455
6	764	-472
7	558	-429
8	465	23
9	179	-108
10	-18	-134
11	68	-339
12	857	-393
13	283	-187
14	385	-20
15	-124	-353
16	-58	-230
17	258	-514
18	-92	-182
19	402	-80
20	783	-481
21	-45	78
22	591	-218
23	-103	-439
24	267	-331
25	316	102
26	286	-396
27	116	-316
28	506	-417
29	149	32
..	...	...
70	71	-231
71	-183	-72
72	306	-127
73	825	-306
74	588	-316
75	-3	-306
76	219	-504
77	137	45
78	932	-510
79	606	-498
80	-158	-487
81	796	-351
82	460	-21
83	354	99
84	-31	91
85	500	-178
86	-129	-444
87	298	-162
88	10	33
89	229	-416
90	206	-74
91	292	-61

```
92  381   -510
93  653     22
94  718   -216
95  849   -187
96   43   -410
97  321   -285
98  321     56
99 -199   -253

[100 rows x 2 columns]
```