answers

June 29, 2019

0.0.1 Exercise 1

```
In [4]: import numpy as np
        big_arr = np.arange(100).reshape(10, 10)


        def exercise1(arr):
          x = arr[-1][:]
          return x

        assert (exercise1(big_arr) == np.array([90, 91, 92, 93, 94, 95, 96, 97, 98, 99])).all()
```

0.0.2 Exercise 2

```
In [5]: def exercise2(number1, low_threshold1, high_threshold1,
                      number2, low_threshold2, high_threshold2):
          cond1 = number1 > low_threshold1 and number1 < high_threshold1
          cond2 = number2 > low_threshold2 and number2 < high_threshold2
          return cond1 or cond2

        assert exercise2(10, 15, 20, 12, 10, 11) == False

        assert exercise2(8, 6, 9, 10, 11, 22) == True
```

0.0.3 Exercise 3

```
In [6]: x = np.random.randn(100)

        def exercise3(arr):
          _sum = 0
          for el in arr:
            _sum = _sum + el

          return _sum / arr.size


        assert '{:3f}'.format(exercise3(x)) == '{:3f}'.format(np.average(x))
```

0.0.4 Exercise 4

In [8]:
```
import pandas as pd
whr = pd.read_csv('world-happiness-report-2019.csv')


def exercise4(row):
  smallest_value = 10000
  for element in row:
    if element <= smallest_value:
      smallest_value = element

  return smallest_value

row = whr.iloc[39, 1:]
assert exercise4(row) == 28
```