python_column_manipulation_workbook_answers

September 22, 2020

1 PYTHON COLUMN MANIPULATION WORKBOOK ANSWERS

Remember, there are different ways to write code to get the same answer, so your answer can be correct and different to the answer example!

If you feel stuck and want some in person help, then have a look at the events page to join in a workshop https://swamphen.co.uk/events.

```
In [ ]: # import pandas
        import pandas as pd
```

```
In [ ]: # read in data from
        # https://vincentarelbundock.github.io/Rdatasets/csv/DAAG/frogs.csv
        # information at https://vincentarelbundock.github.io/Rdatasets/doc/DAAG/frogs.html
        frogs = pd.read_csv('https://vincentarelbundock.github.io/Rdatasets/csv/DAAG/frogs.csv
```

```
In [ ]: # print the tail
        frogs.tail()
```

```
In [ ]: # remove the first column which is just a list of numbers
        frogs = frogs.drop('Unnamed: 0', axis = 1)
```

```
In [ ]: # print the tail to check
        frogs.tail()
```

```
In [ ]: # change the title NoOfPools and NoOfSites to snake case
        frogs = frogs.rename(columns = {'NoOfPools': 'no_of_pools', 'NoOfSites': 'no_of_sites'}
```

```
In [ ]: # print the headder to check
        frogs.head()
```

```
In [ ]: # create a new column that is an average of the means
        frogs['average'] = (frogs['meanmin'] + frogs['meanmax']) / 2
```

```
In [ ]: # print the headder to check
        frogs.head()
```

```
In [ ]: # remove the meanmin and meanmax
        frogs = frogs.drop('meanmin', axis = 1)
```

```
In [ ]: frogs = frogs.drop('meanmax', axis = 1)

In [ ]: # print the tail to check
        frogs.tail()

In [ ]: # plot the average rainfall as a line graph
        import matplotlib.pyplot as plt
        frogs['avrain'].plot()

In [ ]: # calculate the average rainfall from all the sites
        sum(frogs['avrain']) / len(frogs['avrain'])

In [ ]: # plot a straight line at the value of the average on the graph
        frogs['avrain'].plot()
        plt.plot([0,250], [148, 148])

In [ ]: # are there any anomalous results

        # one very high, a few low values
```