Introduction to Python (Spring 2024)

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**Class 4 Homework Exercises**

1. Write the code to print the contents of a text file titled “text\_file.txt”

file = open(“text\_file.txt”, mode=“r”, encoding= “utf-8”)

text = file.read()

print(text)

OR:

text = open(“text\_file.txt”, mode=“r”, encoding= “utf-8”).read()

print(text)

1. Write the code to add a new line of text to “text\_file.txt”

file = open(“text\_file.txt”, mode=“a”, encoding= “utf-8”)

file.write(“new line of text”)

1. How do you open a jupyter notebook and access the files in a folder with the directory address: ../Desktop/python-workshop?

Enter juyter notebook via the terminal or command prompt, and navigate to the python-workshop folder. Alternatively, navigate to the python-workshop folder on the command line/terminal, and then enter jupyter notebook. You can then open files in the python-workshop folder in python.

1. Write the code the get the minimum value of a row “year” in a dataframe df\_years

df\_years.loc[“year”].min()

1. If you are about to write some code using the pandas library, what is the first line of code you have to enter in your program?

import pandas as pd

1. Below is a table containing the population of major cities in millions by year. Write the code to print which cities in the following table had a population greater than 20 million in the year 2010.

*Note: I have made up these numbers except for 2020!*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | London | Paris | New York | Tokyo |
| 2020 | 9.0 | 10.9 | 18.9 | 37.5 |
| 2010 | 8.9 | 10.4 | 19.2 | 37.4 |
| 2000 | 8.9 | 10.5 | 19.1 | 37.1 |
| 1990 | 8.8 | 10.4 | 19.0 | 36.5 |

countries = df.columns.values

for x in countries:

min = df[x].min()

print(x, min)