JIUE3108 Introduction to Computing Using Python

Homework 7

Deadline: 2023.10.29 Midnight (SUN)

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Odd Semester, 2023
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HandWritten Notes are Back!

- Read and summarize the textbook, not write down what is in the Slides.

- Avoid summarizing or copying content directly from the Slides.

! DO NOT BE LATE ! ♨️🫡

4. Code Structures
- Handle Error with try and except
7. Mangle Data Like a Pro
- Text Strings
- Binary Data
8. Data has to go somewhere
- File Input/output
- Structured Text Files
- Structured Binary Files

Text Data, Files, and Exceptions
4.3 Files
4.4 Errors and Exceptions

Week10   ~ 10/29

[Q1] Two-Dimensional Lists Practice 1

python

- Calculate the multiplication tables (2x2 through 16x16) and:

  - Store the results in a 2D list.

  - Each multiplication table should be stored in one row.

  - Print the stored results.

```
[2, 4, 6, 8, 10, 12, 14, 16, 18, 20]
[3, 6, 9, 12, 15, 18, 21, 24, 27, 30]
[4, 8, 12, 16, 20, 24, 28, 32, 36, 40]
[5, 10, 15, 20, 25, 30, 35, 40, 45, 50]
[6, 12, 18, 24, 30, 36, 42, 48, 54, 60]
[7, 14, 21, 28, 35, 42, 49, 56, 63, 70]
[8, 16, 24, 32, 40, 48, 56, 64, 72, 80]
[9, 18, 27, 36, 45, 54, 63, 72, 81, 90]
[10, 20, 30, 40, 50, 60, 70, 80, 90, 100]
[11, 22, 33, 44, 55, 66, 77, 88, 99, 110]
[12, 24, 36, 48, 60, 72, 84, 96, 108, 120]
[13, 26, 39, 52, 65, 78, 91, 104, 117, 130]
[14, 28, 42, 56, 70, 84, 98, 112, 126, 140]
[15, 30, 45, 60, 75, 90, 105, 120, 135, 150]
[16, 32, 48, 64, 80, 96, 112, 128, 144, 160]
Done!
```

[Q2] Height

- Read a file named 'num.txt'.

- Get the average by each line of the file.

- Print the averages.

- Close the file.

[Q2 Answer] Height

```
All data =  ['2056, 24, 5, 123, 51\n', '123, 67, 24, 1024, 31\n', '67, 2056, 24, 5, 123\n', '31, 24, 1024, 31, 1\n', '999, 67, 2056
['2056', ' 24', ' 5', ' 123', ' 51\n']
Average =  451.8

['123', ' 67', ' 24', ' 1024', ' 31\n']
Average =  253.8

['67', ' 2056', ' 24', ' 5', ' 123\n']
Average =  455.0

['31', ' 24', ' 1024', ' 31', ' 1\n']
Average =  222.2

['999', ' 67', ' 2056', ' 24', ' 5\n']
Average =  630.2

['1024', ' 67', ' 24', ' 1024', ' 31\n']
Average =  434.0

['5', ' 99', ' 67', ' 2056', ' 21\n']
Average =  449.6

['255', ' 256', ' 24', ' 5', ' 123\n']
Average =  132.6

['446', ' 31', ' 24', ' 1024', ' 31']
Average =  311.2
```

[Q3] Words

```
python
```

- Read a file named 'youandme.txt'
- Generate a list consisting of each word in the each word.
- Close the file.

```
['I', 'love', 'you', 'and', 'me']
['Dancing', 'in', 'the', 'moonlight']
['Nobody', 'can', 'see']
["It's", 'just', 'you', 'and', 'me', 'tonight']
['I', 'love', 'you', 'and', 'me']
['Dancing', 'in', 'the', 'moonlight']
['Nobody', 'can', 'see']
["It's", 'just', 'you', 'and', 'me', 'tonight']
```

[Q4] Count

python

- Read the file 'youandme.txt'.

- Count how many words are in each line.

- Store them in the list `wordNumList`.

- Close the file.

```
[5, 4, 3, 6, 5, 4, 3, 6]
```

[Q5] Reverse

```
python
```

- Read the file 'youandme.txt'.
- Reverse every line and print it to output.
- Close the file.

```
em dna uoy evol I

thgilnoom eht ni gnicnaD

ees nac ydoboN

thginot em dna uoy tsuj s'tI

em dna uoy evol I

thgilnoom eht ni gnicnaD

ees nac ydoboN
thginot em dna uoy tsuj s'tI
```

[Q6] My trip to JIU

```python
```

- Write your story to the 'MyTripToJIU.txt' file.

  - Why did you come to JIU?

  - What are the advantages and disadvantages of being here?

  - Would you recommend this place to students younger than you?

  - What is your most memorable episode?

  - If you could go back in time, would you choose this place?

- Read back 'MyTripToJIU.txt' and print the file contents.