Writing Files

Table of Contents

1 Writing to File with `.write()` Method

How was the pre-class content of the “*writing to files*”?

Students, drag the icon!

Explain the difference between modes "a" and "w"

Students, write your response!

Writing to File with `.write()` Method (review)

- Writing files with `"w"` mode.

```
with open("my_file.txt", "w", encoding="utf-8") as f:
    f.write("...some content...")
```

Writing to File with `.write()` Method (review)

- Let's create and write string data to a file. We're going to use `.write()` method for writing :

```
1  with open("dummy_file.txt", 'w', encoding="utf-8") as file:
2  # we create and open the file
3
4      file.write('This is the first line of my text file')
5      # writes str data into file
6
7  with open("dummy_file.txt", 'r', encoding="utf-8") as file:
8      print(file.read())  # reads the content of the 'dummy_file'
```

What is the output? Try to figure out in your mind...

Writing to File with `.write()` Method (review)

- It gives an output what we entered using `.write()` method.

```
1  with open("dummy_file.txt", 'w', encoding="utf-8") as file:
2  # we create and open the file
3
4      file.write('This is the first line of my text file')
5      # writes str data into file
6
7  with open("dummy_file.txt", 'r', encoding="utf-8") as file:
8      print(file.read())  # reads the content of the 'dummy_file'
```

```
1  This is the first line of my text file
2
```

Writing to File with `.write()` Method (review)

- Now let's repeat the process and see what happens. This time the file (**dummy_file**) exists :

```
with open("dummy_file.txt", 'w', encoding="utf-8") as file:
    file.write('This is the new line for my dummy_file')
    # we write new str data into it

with open("dummy_file.txt", 'r', encoding="utf-8") as file:
    print(file.read())  # reads the content of the 'dummy_file'
```

Writing to File with `.write()` Method (review)

- Now let's repeat the process and see what happens. This time the file (**dummy_file**) exists :

```
with open("dummy_file.txt", 'w', encoding="utf-8") as file:
    file.write('This is the new line for my dummy_file')
    # we write new str data into it

with open("dummy_file.txt", 'r', encoding="utf-8") as file:
    print(file.read())  # reads the content of the 'dummy_file'
```

```
This is the new line for my dummy_file

```

Writing to File with `.write()` Method (review)

- Let's **write** 5 sentences into the **`dummy_file.txt`** file we created before and then **read** the content of that file.

```
1  with open("dummy_file.txt", 'w', encoding="utf-8") as file:
2      file.write('My first sentence')
3      file.write('My second sentence,')
4      file.write('My third sentence\n')
5      file.write('My fourth sentence ')
6      file.write('My last sentence')
7
8  with open("dummy_file.txt", 'r', encoding="utf-8") as file:
9      print(file.read())
```

What is the output? Try to figure out in your mind...

Students, write your response!

REINVENT YOURSELF

Pear Deck Interactive Slide
Do not remove this bar

Writing to File with `.write()` Method (review)

- The output is as follows :

```
with open("dummy_file.txt", 'w', encoding="utf-8") as file:
    file.write('My first sentence')
    file.write('My second sentence,')
    file.write('My third sentence\n')
    file.write('My fourth sentence ')
    file.write('My last sentence')

with open("dummy_file.txt", 'r', encoding="utf-8") as file:
    print(file.read())
```

```
My first sentenceMy second sentence,My third sentence
My fourth sentence My last sentence

```

Writing to File with `.write()` Method (review)

- **Task :**
  - Now, think of that we have a **`list`** of fruit names.
  - Let's write them to a file named **`fruits.txt`** each on separate lines one after another.
  - Read and display the entire content,
  - Read and display the content in a **`list`** form.

```
1  fruits = ['Banana', 'Orange', 'Apple', 'Strawberry', 'Cherry']
2
```

Writing to File with `.write()` Method (review)

- The code snippet can be as follows :

```
1  fruits = ['Banana', 'Orange', 'Apple', 'Strawberry', 'Cherry']
2
3  with open("fruits.txt", 'w', encoding="utf-8") as file:
4      for basket in fruits:
5          file.write(basket + '\n')  # adds a newline character to each
               string
6
7  with open("fruits.txt", 'r', encoding="utf-8") as file:
8      print(file.read())
9
10 with open("fruits.txt", 'r', encoding="utf-8") as file:
11     print(file.readlines())  # reads and displays entire lines in a list
```

What is the output? Try to figure out in your mind...

Writing to File with `.write()` Method (review)

- Here the output is :

```
Banana
Orange
Apple
Strawberry
Cherry

['Banana\n', 'Orange\n', 'Apple\n', 'Strawberry\n', 'Cherry\n']

```

Writing to File with `.write()` Method

- **Task :**
  - Now, think of that we have a **`list`** of flower names.
  - Let's write them to a file named **`flowers.txt`** each on separate line one after another and **separated** by an empty line.

file look like

```
Jasmine

Rose

Lily

Daisy

Tulip
```

```
1 flowers = ['Jasmine', 'Rose', 'Lily', 'Daisy', 'Tulip']
2
```

Writing to File with `.write()` Method

- The code snippet can be as follows :

```
1  flowers = ['Jasmine', 'Rose', 'Lily', 'Daisy', 'Tulip']
2
3  with open("flowers.txt", 'w', encoding="utf-8") as file:
4      for basket in flowers:
5          file.write(basket + "\n\n")
6
7  with open("flowers.txt", 'r', encoding="utf-8") as file:
8      print(file.read())
9
```

What is the output? Try to figure out in your mind...

Writing to File with `.write()` Method

- The output is as follows :

```
1 flowers = ['Jasmine', 'Rose', 'Lily', 'Daisy', 'Tulip']
2
```

Output

```
Jasmine

Rose

Lily

Daisy

Tulip
```

2 Writing to File with `.writelines()` Method

Make connections

How are these two methods connected?

Type your answers.

`.readlines()`

`.writelines()`

Students, write your response!

Writing to File with `.writelines()` Method (review)

- Let's see how we do it :

```
1  fruits = ['Banana\n', 'Orange\n', 'Apple\n', 'Strawberry\n', 'Cherry\n']
2
3  with open("fruits.txt", 'w', encoding="utf-8") as file:
4      file.writelines(fruits)  # takes an iterator for writing
5
6  with open("fruits.txt", 'r', encoding="utf-8") as file:
7      print(file.read())
8
9  with open("fruits.txt", 'r', encoding="utf-8") as file:
10     print(file.readlines())
```

Writing to File with `.writelines()` Method (review)

- The output looks like :

```
Banana
Orange
Apple
Strawberry
Cherry

['Banana\n', 'Orange\n', 'Apple\n', 'Strawberry\n', 'Cherry\n']

```

Writing to File with `.writelines()` Method

- **Task :**
  - Use the same **`list`** of flower names,
  - Modify the **`list`** for use,
  - Overwrite them to the same **`flowers.txt`** file each on separate lines one after another.

```
1 flowers = ['Jasmine', 'Rose', 'Lily', 'Daisy', 'Tulip']
2
```

Writing to File with `.writelines()` Method

- The code snippet and the output can be as follows :

```
1  flowers = ['Jasmine\n', 'Rose\n', 'Lily\n', 'Daisy\n', 'Tulip']
2
3  with open("flowers.txt", 'w', encoding="utf-8") as file:
4      file.writelines(flowers)  # takes "flowers" as an iterator
5
6  with open("flowers.txt", 'r', encoding="utf-8") as file:
7      print(file.read())
8
```

Output

```
Jasmine
Rose
Lily
Daisy
Tulip
```

3

Appending to File with `'a'`

Appending to File with `'a'` (review)

- Writing files with `"a"` mode.

```
with open("my_file.txt", "a", encoding="utf-8") as f:
    f.write("...some content...")
```

Appending to File with `'a'` (review)

- **Task :**
  - Let's add `'melon'` to our existing **`fruits.txt`** file as the last line,
  - Read and display the entire file content,
  - Read and display the entire file content line by line in a **`list`** form.

Appending to File with `'a'` (review)

- The code snippet and the output are as follows:

```
with open("fruits.txt", 'a', encoding="utf-8") as file:
    file.write('Melon\n')  # adds Melon to the end of the text

with open("fruits.txt", 'r', encoding="utf-8") as file:
    print(file.read())

with open("fruits.txt", 'r', encoding="utf-8") as file:
    print(file.readlines())
```

```
Banana
Orange
Apple
Strawberry
Cherry
Melon

['Banana\n', 'Orange\n', 'Apple\n', 'Strawberry\n', 'Cherry\n', 'Melon\n']

```

Appending to File with `'a'`

- **Task :**
  - Let's add `'orchid'` to our existing `flowers.txt` file as the last line,
  - Read and display the entire file content.

Appending to File with `'a'`

- The code snippet and the output are as follows:

```
1  with open("flowers.txt", 'a', encoding="utf-8") as file:
2      file.write("\nOrchid")
3
4  with open("flowers.txt", 'r', encoding="utf-8") as file:
5      print(file.read())
6
```

Output

```
Jasmine
Rose
Lily
Daisy
Tulip
Orchid
```

Did you find this lesson interesting and challenging?

Too hard

Just right

Too easy

Students, drag the icon!

THANKS!

End of the Lesson

(Writing Files)

next Lesson

Working with CSV Files

click above

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