

Reading and Writing Text Files in Python

Introduction:

Today, we will explore the fundamentals of reading from and writing to text files in Python. This is a crucial skill in programming as it allows us to interact with external data and store our results for future use.

Reading from a Text File:

Let's start with reading from a text file. In this example, we are reading from a file called 'sample.txt'. Here's how we do it:

```
file_path = 'sample.txt'
with open(file_path, 'r') as file:
    content = file.read()
    print(f"File Content:\n\n{content}\n\n")
```

- **Explanation:**

`open(file_path, 'r')`: We use the open function to open the file in read mode ('r').

`with open(...) as file:` The with statement ensures that the file is properly closed after reading its contents.

`content = file.read()`: We use the read method to read the entire content of the file.

`print(f"File Content:\n\n{content}\n\n")`: We print the content to the console.

Writing to a Text File:

Now, let's move on to writing to a text file. In this example, we will create a new file named 'output.txt' and write some content to it:

```
file_path = 'output.txt'
```

```
with open(file_path, 'w') as file:
```

```
    content_to_write = "Hello,this is a sample text.\n Python is fun!"
```

```
    file.write(content_to_write)
```

```
    print(f"Content written to {file_path}")
```

- **Explanation:**

`open(file_path, 'w')`: This time, we open the file in write mode ('w').

`with open(...) as file:` Again, we use the with statement for proper file handling.

`file.write(content_to_write)`: We use the write method to add content to the file.

`print(f"Content written to {file_path}")`: We print a confirmation message.

Conclusion:

In summary, reading and writing text files in Python is straightforward and essential for various programming tasks. Understanding these basics will empower you to work with external data and store your results efficiently. Practice and experimentation will enhance your proficiency in file handling with Python.

