

Python-File Handling

Python provides a built-in module called `io` (Input/Output) to handle files. The following are the basic file handling operations:

Opening and Closing Files

- **Opening a File:** You can open a file using the `open()` function, which returns a file object.

Open a file in read mode

```
file = open("example.txt", "r")
```

Open a file in write mode

```
file = open("example.txt", "w")
```

```
* **Closing a File**: Always close the file when you are done with it to free up space.
```python
Close the file using the close() method
file.close()

Close the file using the with statement (recommended)
with open("example.txt", "r") as file:
 print(file.read())
```

## Reading from Files

- **Reading a Single Line:** You can read a single line of text from a file by calling `readline()`.

```
file = open("example.txt", "r") print(file.readline())
```

```
* **Reading Multiple Lines**: You can read multiple lines using a loop.
```python
file = open("example.txt", "r")
for line in file:
    print(line)
```

Writing to Files

- **Writing Text:** You can write text to a file using the `write()` method.

```
file = open("example.txt", "w") file.write("Hello, World!")
```

```
* **Appending Text**: You can append text to an existing file by opening it in append mode.
```python
file = open("example.txt", "a")
file.write("\nThis is a new line.")
```

## Example Use Case

Suppose you have a file called `names.txt` containing the names of your friends, one per line. You want to read the names from this file and write them to another file called `output.txt`.

```
with open("names.txt", "r") as input_file:
 with open("output.txt", "w") as output_file:
 for name in input_file:
 output_file.write(name)
```

This code opens `names.txt` for reading and `output.txt` for writing, then reads each line from `names.txt` and writes it to `output.txt`. When you're done with both files, they are automatically closed.

Remember to always close your files when you're finished using them. You can use the `with` statement or the `close()` method to do this.