

File Handling and User Input in python

Taking User Input

Syntax:

```
name = input("Enter your name: ")
print("Hello", name)
```

All input from `input()` is a string, so for numbers:

```
age = int(input("Enter your age: "))
print("You will be", age + 1, "next year.")
```

File Handling

File handling allows you to **create**, **read**, **write**, and **delete** files in Python using built-in functions.

Basic File Operations

Mode	Description
'r'	Read (default). File must exist.
'w'	Write. Creates file or overwrites.
'a'	Append. Adds to end if file exists.
'x'	Create. Fails if file exists.
'b'	Binary mode (add to mode string)

1. Read a File

```
file = open("demo.txt", "r")
content = file.read()
print(content)
file.close() # Always close the file after you're done.
```

- `read()` = whole content
- `readline()` = one line
- `readlines()` = list of lines

Use `with` statement (better way)

```
with open("demo.txt", "r") as file:
    content = file.read()
    print(content)
# File auto-closed
```

Note: If the file is located in a different location, you will have to specify the file path, like this:

Example

```
f = open("D:\\myfiles\\welcome.txt")
print(f.read())
```

2. Write to a File

Overwrite ('w' mode)

```
f = open("demo.txt", "w")
f.write("Hello, this is a new file.")
```

Use `with` statement (better way)

```
with open("demo.txt", "w") as file:
    file.write("Hello, this is a new file.")
```

If the file exists, it will be **overwritten**.

Append to a File

Add content without deleting existing data

```
with open("demo.txt", "a") as file:
    file.write("\nThis line is appended.")
```

Write Multiple Lines

```
lines = ["Line 1\n", "Line 2\n", "Line 3\n"]

with open("demo.txt", "w") as file:
    file.writelines(lines)
```

Read Line by Line

```
with open("demo.txt", "r") as file:
    for line in file:
        print(line.strip())
```

3. Check if File Exists (Optional)

```
import os

if os.path.exists("demo.txt"):
    print("File exists")
else:
    print("File not found")
```

4. Delete a File

```
import os

if os.path.exists("demo.txt"):
    os.remove("demo.txt")
    print("File deleted")
```

Assignment 1:

1. Create a file named `student.txt`
2. Write "Hello from student file" in it
3. Append "This is a second line" to it
4. Read and print the content

Assignment 2:

1. Ask the user 3 tasks and save them in a file named `todo.txt`.
Example:
Enter task 1: ...
Enter task 2: ...
Enter task 3: ...
2. Read the tasks from `todo.txt` and print them line by line.
3. Let the user add more tasks (append mode) and save them without overwriting the file.