

# ■ Python File Handling – Complete Notes with Syntax

## 1. Opening a File

Syntax: `file = open("filename", "mode")`

Modes:

- "r" → Read
- "w" → Write (overwrites file)
- "a" → Append
- "rb" → Read Binary
- "wb" → Write Binary
- "r+" → Read + Write

## 2. Reading a File

Syntax:

```
file.read() # Read entire file
file.read(n) # Read first n characters
file.readline() # Read one line
file.readlines() # Read all lines as list
for line in file: # Loop through file
print(line)
```

## 3. Writing to a File

Syntax:

```
file = open("filename.txt", "w")
file.write("content")
file.close()
```

## 4. Appending to a File

Syntax:

```
file = open("filename.txt", "a")
file.write("extra content")
file.close()
```

## 5. User Input → Write

Syntax:

```
file = open("filename.txt", "a")
name = input("Enter name: ")
age = input("Enter age: ")
file.write("\nName: " + name)
file.write("\nAge: " + age)
file.close()
```

## 6. Binary File (Pickle - Serialization)

Syntax:

```
import pickle
# Write object
file = open("data.pkl", "wb")
pickle.dump(python_object, file)
file.close()
```

# Read object

```
file = open("data.pkl", "rb")
obj = pickle.load(file)
```

```
file.close()
```

## **7. Closing a File**

Syntax:

```
file.close()
```

## **8. Using with (Best Practice)**

Syntax:

```
with open("filename.txt", "r") as file:
```

```
    data = file.read()
```

```
# file auto closed
```

## **9. File Pointer Functions**

- file.tell() → Get current cursor position
- file.seek(pos) → Move cursor to position