## **File Handling**

Python can read from and write to files on your system.

### **Opening and Closing Files**

*# Opening a file (creates it if it doesn't exist)*  
file = open("example.txt", "w") *# "w" for write mode*  
file.close() *# Always close files after use*  
  
*# Better approach using "with" statement (automatically closes file)*  
**with** open("example.txt", "w") **as** file:  
 *# File operations here*  
 **pass** *# File is automatically closed after the block*

### **File Modes**

* "r" - Read (default)
* "w" - Write (creates new file or truncates existing)
* "a" - Append (creates new file or appends to existing)
* "r+" - Read and write
* "b" - Binary mode (e.g., “rb” for reading binary)

### **Writing to Files**

*# Writing text*  
**with** open("example.txt", "w") **as** file:  
 file.write("Hello, World!\n")  
 file.write("This is a test file.")  
  
*# Writing multiple lines*  
lines = ["Line 1\n", "Line 2\n", "Line 3\n"]  
**with** open("example.txt", "w") **as** file:  
 file.writelines(lines)

### **Reading from Files**

*# Reading entire content*  
**with** open("example.txt", "r") **as** file:  
 content = file.read()  
 print(content)  
  
*# Reading line by line*  
**with** open("example.txt", "r") **as** file:  
 first\_line = file.readline()  
 print(first\_line)  
  
*# Reading all lines into a list*  
**with** open("example.txt", "r") **as** file:  
 lines = file.readlines()  
 **for** line **in** lines:  
 print(line.strip()) *# strip() removes newline character*  
  
*# Iterating through a file*  
**with** open("example.txt", "r") **as** file:  
 **for** line **in** file:  
 print(line.strip())

**Exercise 15**: Create a program that asks the user to enter some text, saves it to a file, then reads the file back and displays its contents.