

8.3 File handling

Name: _____ Class: _____ Date: _____

Total: 9 marks

Objective

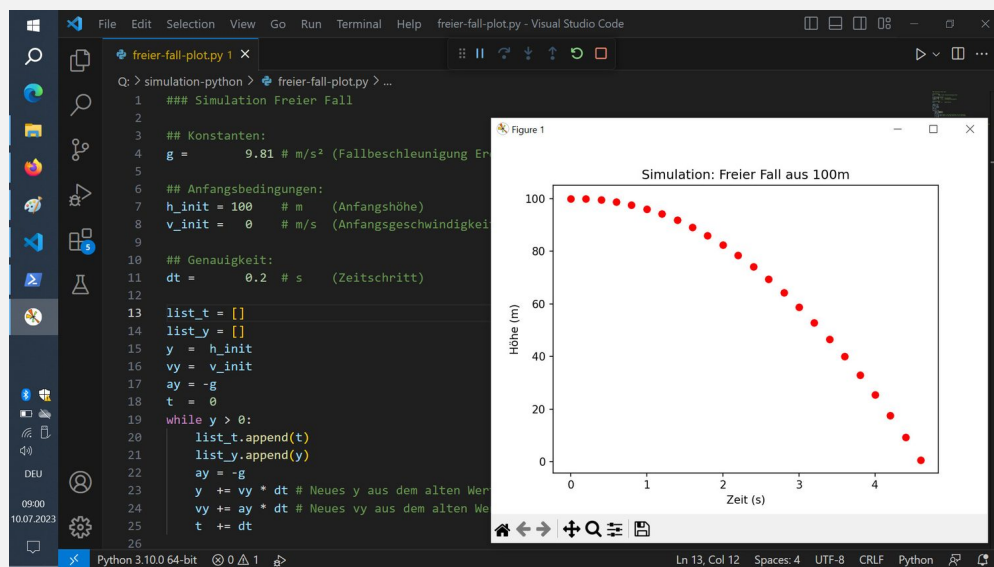
Build the skills to answer exam questions on **file handling** 文件处理—storing data in a **file** 文件 so it is kept after the program stops, and the **open** → **use** → **close** pattern for reading and writing.

You must be able to:

- explain why a program uses a file to store data
- write pseudocode to **open**, **write**, **read** and **close** a file
- describe the difference between writing to and reading from a file

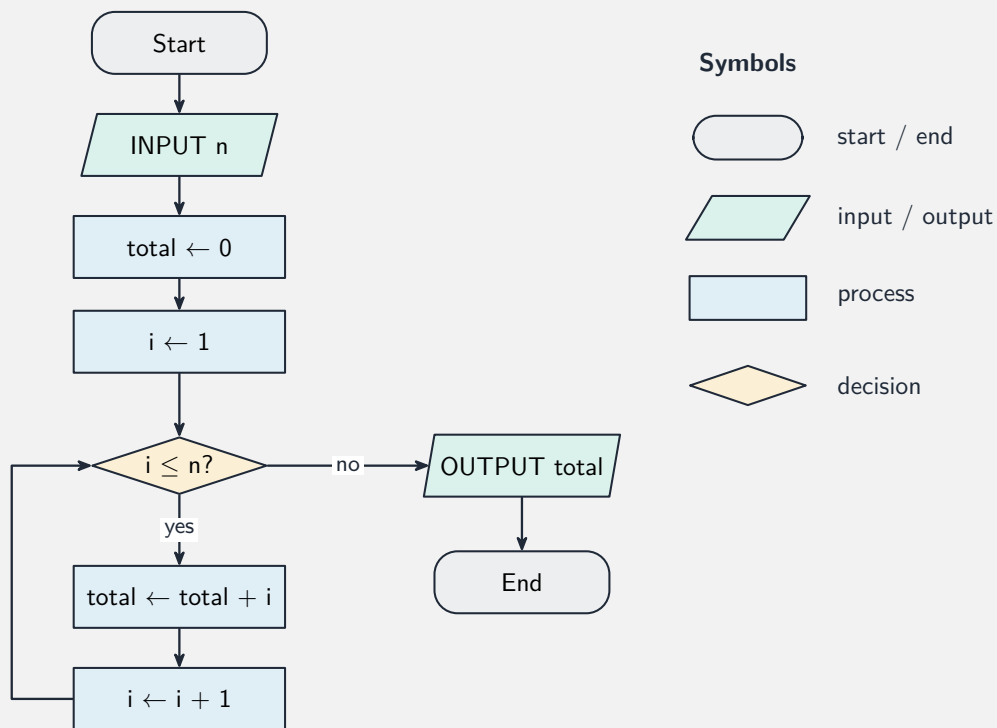
1 Worked examples

■ Open, use, close



Data written to a file is kept after the program stops, unlike a variable in memory

Image: source



File handling follows an open - read/write - close sequence

Write then read back one line:

- `OPENFILE "data.txt" FOR WRITE → WRITEFILE "data.txt", "Hello" → CLOSEFILE "data.txt"`
- `OPENFILE "data.txt" FOR READ → READFILE "data.txt", line → CLOSEFILE "data.txt"`

Always **close** a file when finished.

2 Practice

2.1 State one reason a program stores data in a file rather than in a variable. [1]

2.2 State the three steps used to handle a file, in order. [3]

3 Exam-style questions

3.1 A program must keep its data after it stops running. The data should be stored: [1]

- **A** in a variable
 - **B** in a constant
 - **C** in a file
 - **D** in an array
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3.2 A program writes a player's name to a file, then later reads it back.

(a) Write pseudocode to open `scores.txt`, write the name in variable `playerName` to it, and close it. [3]

(b) State what could go wrong if the file is **not** closed after writing. [1]

4 Go further

You are now ready for the real exam questions on this subtopic. Open the **8.3 File handling** past-paper sheet in the Library, or try these in **Practice mode**:

- 0478/21 N25 —Q9 (file handling)
- 0478/22 M25 —Q2 (writing to a file)

Solutions

2.1 a file keeps the data after the program stops / it is permanent (non-volatile) storage.

2.2 open the file; read or write the data; close the file.

3.1 C. A file keeps data after the program stops.

3.2 (a) `OPENFILE "scores.txt" FOR WRITE; WRITEFILE "scores.txt", playerName; CLOSEFILE "scores.txt".`

(b) the data may not be saved properly / the file may be left locked or corrupted.