

THEME B: COMPUTATIONAL THINKING · B2.5

File processing

Original practice questions · 33 marks · about 55 minutes · covers B2.5.1

Instructions. Answer all questions. The maximum mark for this paper is [33 marks]. The marks available are shown in brackets. Parts badged **HL** assess higher level only content; standard level students may leave these out. Questions that ask you to construct code may be answered in **either Java or Python**. State which language you are using. Marks are for the logic, not for perfect syntax.

1

Total: 6 marks

A sports club stores its members in a text file. Each line holds one member: surname, email address and the year they joined, separated by commas.

members.txt

```
Okafor,t.okafor@example.net,2024
Lindqvist,s.lind@example.org,2025
Haddad,r.haddad@example.com,2025
Novak,p.novak@example.net,2023
```

- (a) State the three modes in which a sequential file can be opened. [3]

- (b) Explain what would happen to the existing records if the club opened this file in write mode, rather than append mode, in order to add a new member. [3]

2

Total: 7 marks

The club needs to display the surname of every member.

- (a) Construct a program that reads `members.txt` one line at a time and prints only the surname from each line. **[5]**

- (b)** State **one** reason why the file must be closed once processing is complete. [2]

3

Total: 6 marks

A new member, Sato, with email a.sato@example.com, joins in 2026.

- (a) Construct a program that adds this member's record to the end of `members.txt`. [4]

- (b) Outline **one** advantage of appending to the file rather than rewriting the whole file. [2]

4

Total: 6 marks

The club wants to know how many members joined in 2025.

Construct a program that reads the file, counts the members who joined in 2025, and prints the total.

[6]

5

Total: 4 marks

File operations can fail for reasons outside the programmer's control.

(a) Identify **two** things that could go wrong when a program tries to open this file.

[2]

(b) Outline how the program should respond if the file cannot be found.

[2]

6

Total: 4 marks

The club also produces a summary file.

Construct a program that writes a heading line followed by one line per member to a new file called `report.txt`.

[4]

END OF QUESTIONS