

File Handling and Text Processing Assignments in C

Problem 1: Count Lines and Vowels in a File

Objective: Read a text file and count:

- Total number of lines
- Total number of vowels (`a`, `e`, `i`, `o`, `u` – both cases)

Tasks:

- Open and read the file character by character.
- Increment line count on '`\n`'.
- Check each character for vowels.

Output:

Print total lines and vowel count.

Problem 2: Read Integers from a File into an Array

Objective: Read integers from a file and store them in an array.

Tasks:

- Open the file and read space/newline-separated integers.
- Store them in an array.
- Print the array contents.

Output:

Print all integers read from the file.

Problem 3: Count Frequency of a Word in a File

Objective: Count how many times a given word appears in a text file.

Tasks:

- Prompt user for the word to search.
- Read the file word by word.
- Compare with the target word and increment a counter.

Output:

Print the frequency of the given word.

Problem 4: Delete Words from One File in Another

Objective: Given two files:

- File A: Text source
- File B: Words to remove

Tasks:

- Read words from File B into a list/set.
- Filter out those words while reading File A.
- Output the cleaned content.

Output:

Print or write to a new file with specified words removed.

Problem 5: Validate Login from File

Objective: Authenticate a user using a file with username-password pairs.

Tasks:

- Take username and password as input.
- Open credentials file (`username password` per line).
- Compare input with stored pairs.

Output:

- If match: "Welcome, [username]!"
- Else: "Invalid credentials."