

# File Handling and Text Processing Assignments in C

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## 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.

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## 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.

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## 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.

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## 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.

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## 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."