

Petrotranz - Programming Test

Objective

Create a small application that satisfies the following user personas. You can use any language you feel comfortable with, but C# is preferred. The results can be output to the console.

User Personas and Requirements

1. Librarian:

- **Task:** Calculate the number of pages in a book.
- **Details:** Given a word count per page, calculate the total number of pages for a given book.
- **Example Input:** Total words: 50,000; Words per page: 250
- **Example Output:** Total pages: 200

2. Student:

- **Task:** Provide basic word and character statistics about a book.
- **Details:** Calculate the total number of words and characters in a given text.
- **Example Input:** "A Tale of Two Cities - Charles Dickens.txt"
- **Example Output:** Total words: 135,420; Total characters: 730,000

3. Student:

- **Task:** Search for a specific word in the book.
- **Details:** Implement a simple search function to find the occurrences of a word in the text.
- **Example Input:** Search word: "revolution"; "A Tale of Two Cities - Charles Dickens.txt"
- **Example Output:** The word "revolution" appears 45 times.

4. Business Analyst:

- **Task:** Identify the most frequently used words in the book.
- **Details:** List the top 10 most frequently used words in the text.
- **Example Input:** "A Tale of Two Cities - Charles Dickens.txt"
- **Example Output:** ["the", "and", "of", "to", "a", "in", "that", "it", "was", "he"]

Instructions

- Use the included files “A Tale of Two Cities - Charles Dickens.txt” and “Alice’s Adventures in Wonderland - Lewis Carroll.txt” to demonstrate your program’s completeness.
- List any assumptions you made as well as the tools you used to create your solution.
- Your solution can be submitted via a GitHub/BitBucket/GitLab repository link. Please reach out to us if you have any questions.