Experiment-16

Write a C program for implementing a Lexical Analyzer to Count the number of characters, words, and lines .

Program:

```
#include <stdio.h>

int main() {
    char c;
    int characters = 0, words = 0, lines = 0;

    printf("Enter text (Ctrl+D or Ctrl+Z to end input):\n");

    while ((c = getchar()) != EOF) {
        characters++;

        // Check for a new line
        if (c == '\n') {
            lines++;
            words++;
        }

        // Check for a space or tab to count words
        if (c == ' ' || c == '\t') {
```

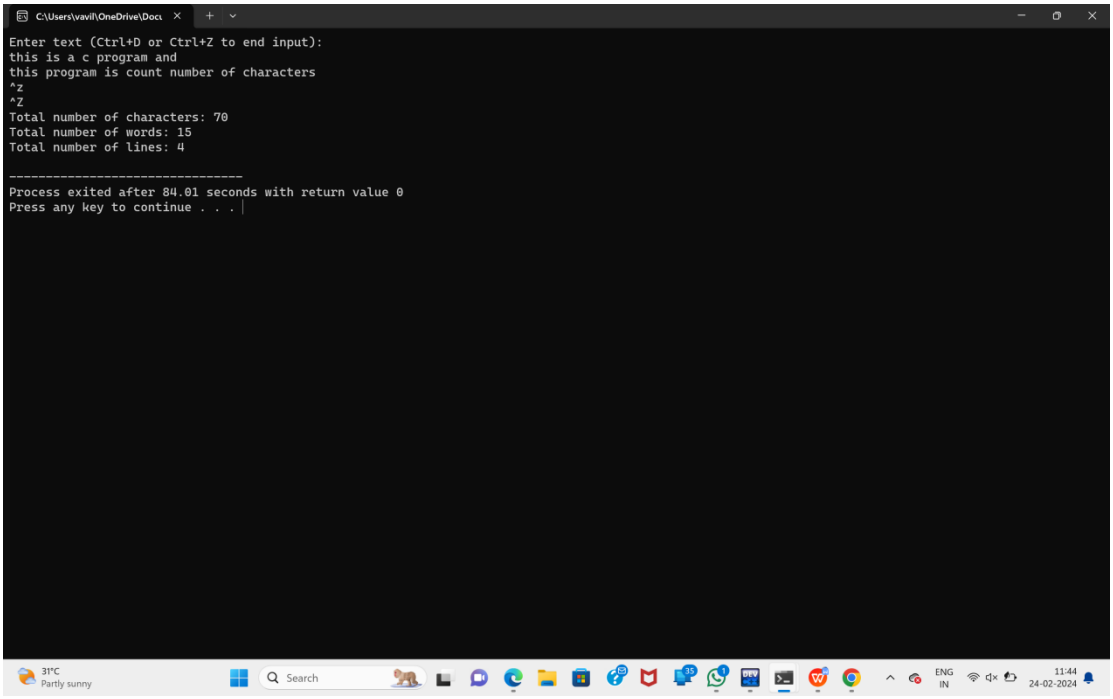
```
            words++;
        }
    }

    // Handling the case where the last line might not end with a newline
    if (characters > 0) {
        lines++;
        words++;
    }

    printf("Total number of characters: %d\n", characters);
    printf("Total number of words: %d\n", words);
    printf("Total number of lines: %d\n", lines);

    return 0;
}
```

Out put:


C:\Users\vavil\OneDrive\Docu
Enter text (Ctrl+D or Ctrl+Z to end input):
this is a c program and
this program is count number of characters
^z
^Z
Total number of characters: 70
Total number of words: 15
Total number of lines: 4

Process exited after 84.01 seconds with return value 0
Press any key to continue . . .
31°C
Partly sunny
Search
ENG
IN
11:44
24-02-2024