4.Design a lexical Analyzer to find the number of whitespaces and newline characters.

PROGRAM:

```c
// Program 4: Count whitespaces and newlines
#include <stdio.h>

int main() {
   char ch;
   int spaces = 0, tabs = 0, newlines = 0;

   printf("Enter text (press Enter on an empty line to finish):\n");

   while (1) {
     ch = getchar();

     // stop when empty line entered
     if (ch == '\n') {
       newlines++;
       char next = getchar();
       if (next == '\n') break;  // stop on empty line
       ungetc(next, stdin); // put back
     }

     if (ch == ' ')
```
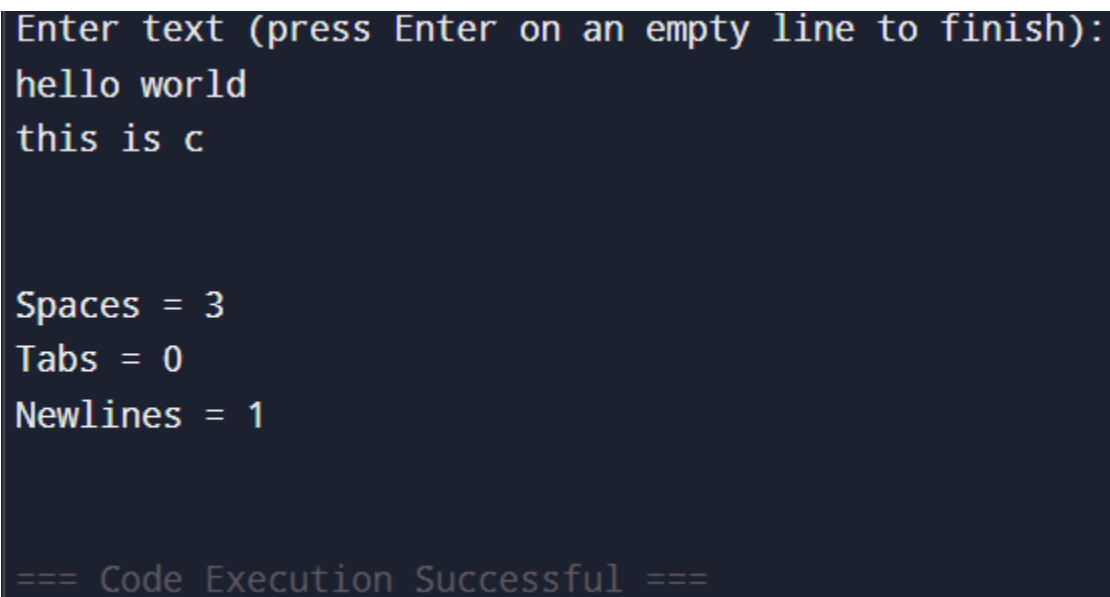
```c
        spaces++;
    else if (ch == '\t')
        tabs++;
}


    printf("Spaces = %d\n", spaces);

    printf("Tabs = %d\n", tabs);

    printf("Newlines = %d\n", newlines - 1);


    return 0;
}
```

OUTPUT:

```
Enter text (press Enter on an empty line to finish):
hello world
this is c


Spaces = 3
Tabs = 0
Newlines = 1


=== Code Execution Successful ===
```