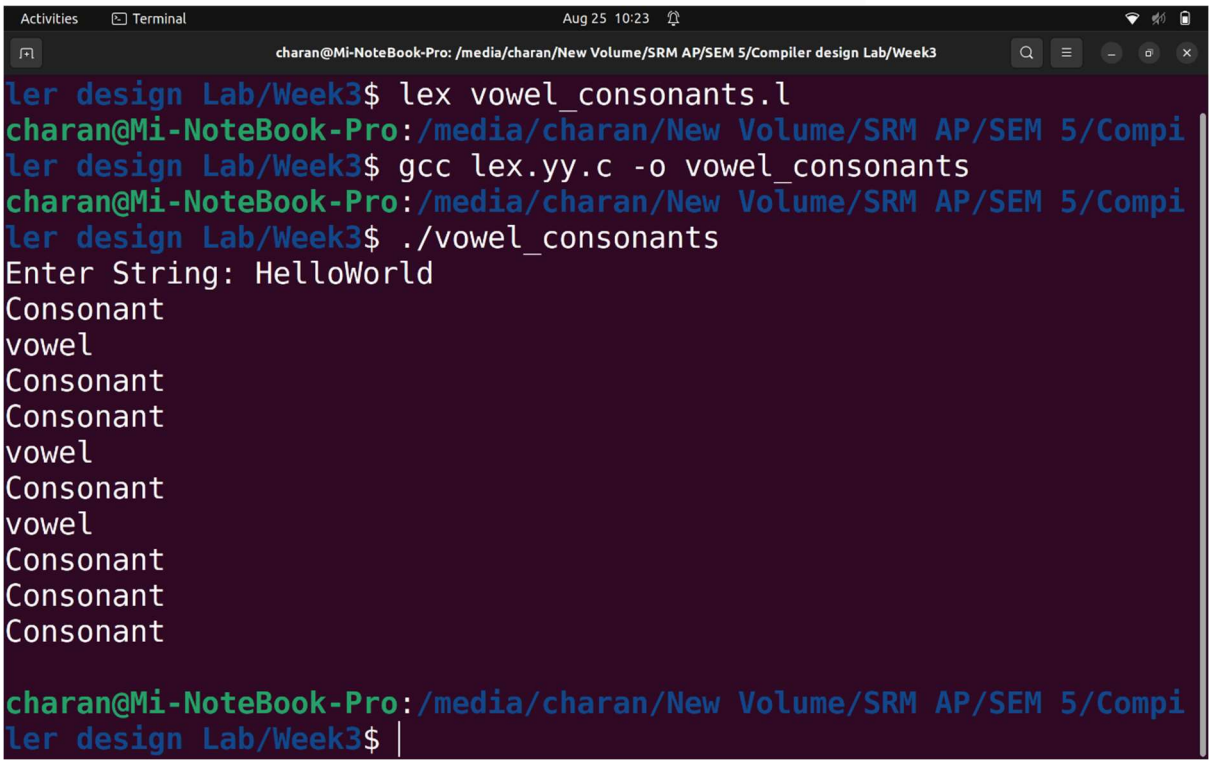
Week-3 Assignment

Introduction to LEX Tool

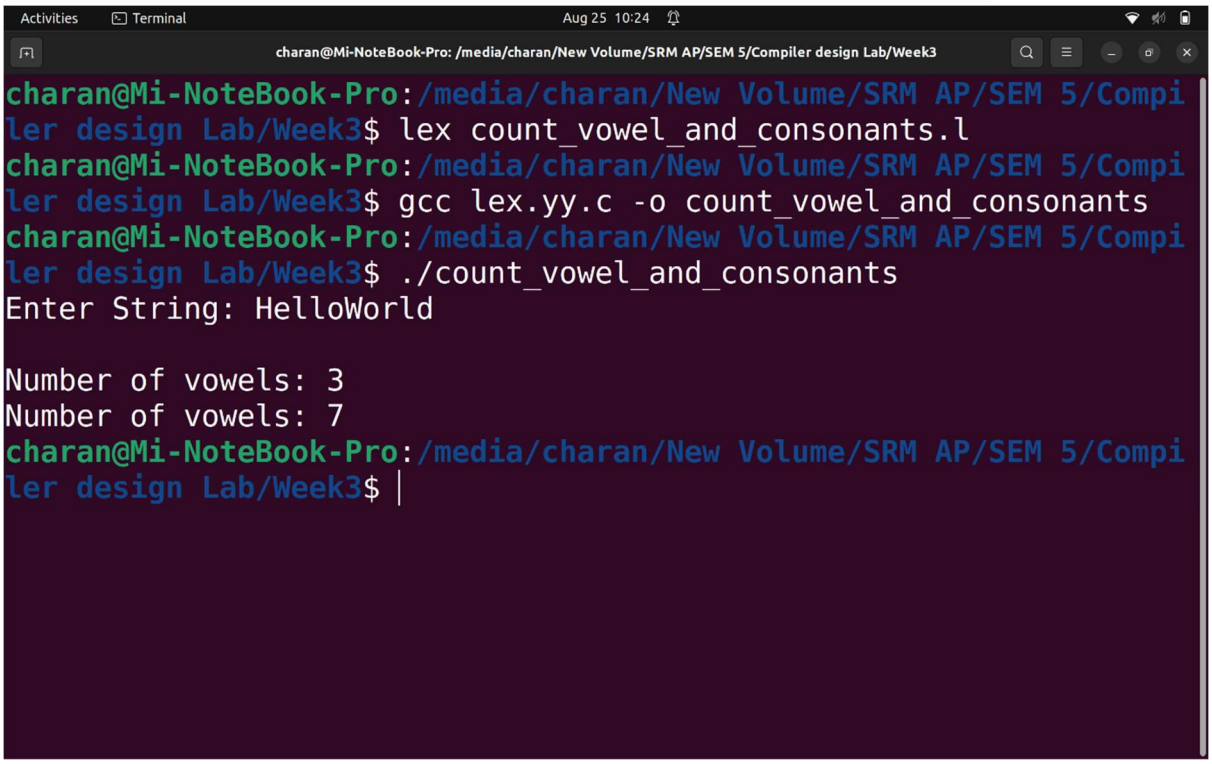
a. Identification of Vowels and Consonants

```
%{
        #include<stdio.h>
        #include<ncurses.h>
%}

%%
[aeiouAEIOU] {printf("vowel\n");}
[a-zA-Z] {printf("Consonant\n");}
%%
int yywrap(){return 1;}
int main()
{
        printf("Enter String: ");
        yylex();
        return 0;
}
```



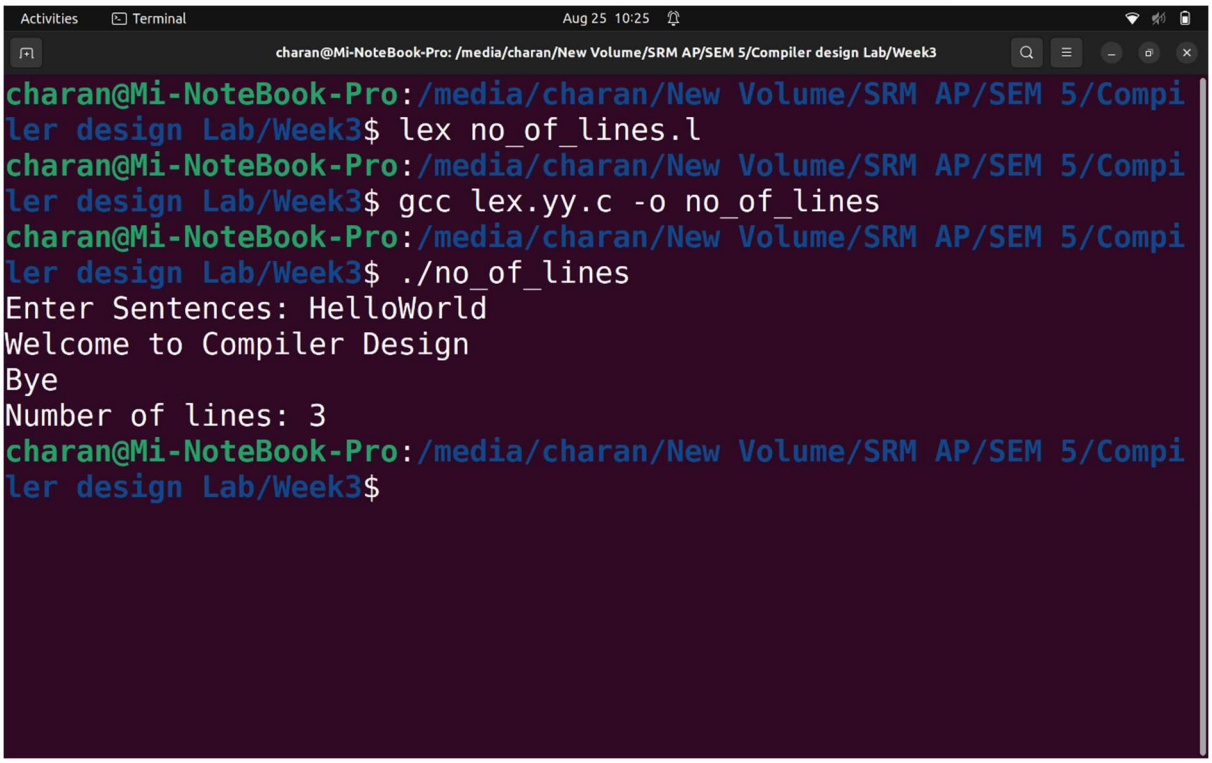
b. count number of vowels and consonants

```
%{
        #include<stdio.h>
        int vow=0;
        int con=0;
%}

%%
[aeiouAEIOU] {vow++;}
[a-zA-Z] {con++;}
%%
int yywrap(){}
int main()
{
        printf("Enter String: ");
        yylex();
        printf("Number of vowels: %d\n",vow);
        printf("Number of vowels: %d\n",con);
        return 0;
}

```



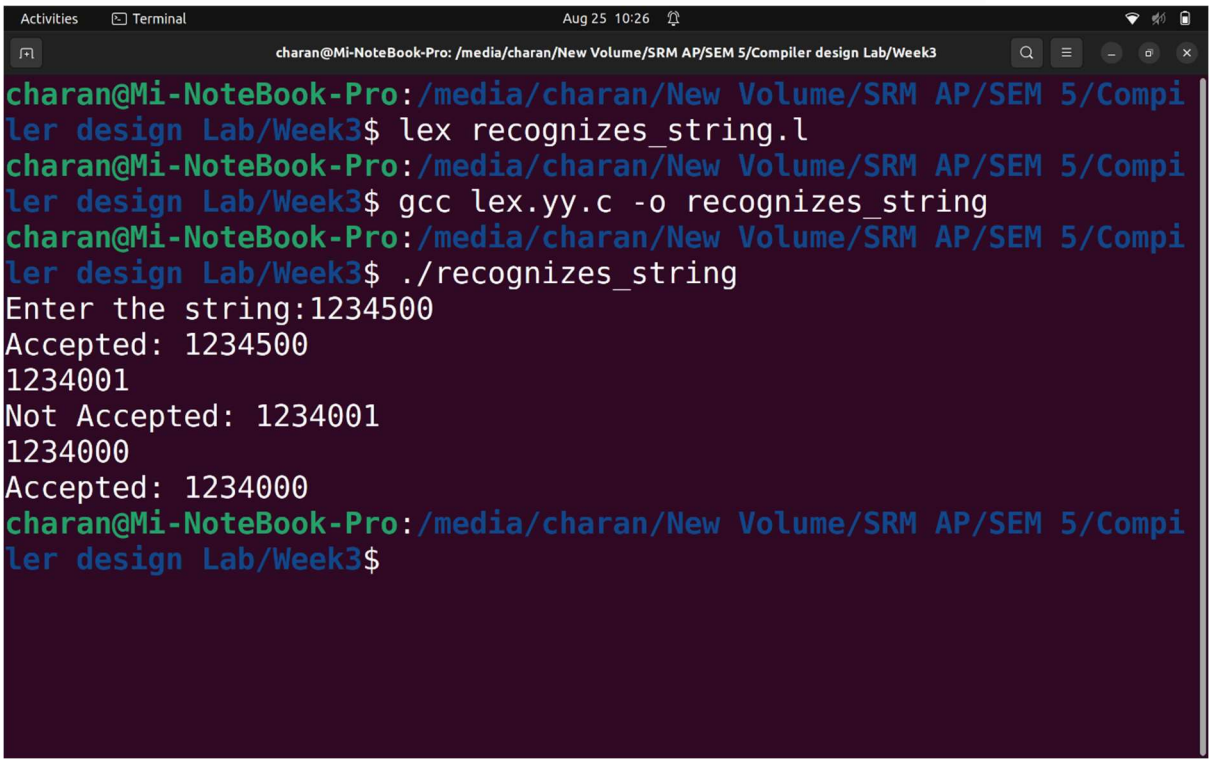
c. Count the number of Lines in given input

```
%{
        #include<stdio.h>
        int count=0;
%}

%%

\n {count++;}
.|\\n
%%
int yywrap(void){ return 1;}
int main()
{
        printf("Enter Sentences: ");
        yylex();
        printf("Number of lines: %d\n",count);
        return 0;
}

```



d. Recognize strings ending with 00

```
%{
        #include<stdio.h>
        #include <ncurses.h>
%}

%%
[0-9]*00 {printf("Accepted: %s\n",yytext);}
[0-9]* {printf("Not Accepted: %s\n",yytext);}
.|\n
%%
int yywrap(void){
        return 1;
}
int main()
{
        printf("Enter the string:");
        yylex();
        return 0;
}
```



e. Recognize a string with three consecutive 0's

```
%{
#include <stdio.h>
%}

%%
\d*000\d*   printf("Matched: %s\n", yytext);
.|\n        /* ignore other characters */
%%
int yywrap(){return 1;}
int main() {
    yylex();
    return 0;
}

```

```
PS C:\Users\91879\OneDrive\Desktop> lex .\consecutive_zeroes.l
PS C:\Users\91879\OneDrive\Desktop> gcc -o consecutive_zeroes .\lex.yy.c
PS C:\Users\91879\OneDrive\Desktop> .\consecutive_zeroes.exe
1010001010
Matched: 000
01010101
101010101010
1000010101
Matched: 000
PS C:\Users\91879\OneDrive\Desktop>
```