

Week-3

1. Write LEX program which will recognize strings ending with 00

Code:

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

%%

[0-1]*00 {printf("Given string ends with 00");}
[0-1]* {printf("Given string doesn't ends with 00");}
.* {printf("Invalid string");}
%%

int yywrap() {
return 1;
}

int main() {
printf("Enter the string : ");
yylex();
return 0;
}
```

Output:

```
C:\Users\Yeswanth\Downloads\Sem5\Compilers\CD-Lex-Programs>flex endwith00.l
C:\Users\Yeswanth\Downloads\Sem5\Compilers\CD-Lex-Programs>gcc lex.yy.c
C:\Users\Yeswanth\Downloads\Sem5\Compilers\CD-Lex-Programs>a.exe
Enter the string : 100000111100
Given string ends with 00
```

2. Lex program to count number of vowels and number of consonants in a string

Code:

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

[aeiouAEIOU] {vowels++;}
[a-zA-Z] {consonants++;}
%%

int yywrap()
{
    return 1;
}

main()
{
    printf("Enter the string.. at end press^d\n");
    yylex();
    printf("No. of vowels=%d\n No. of consonants=%d\n",vowels,consonants);
}
```

Output:

```
C:\Users\Yeswanth\Downloads\Sem5\Compilers\CD-Lex-Programs>flex vowels.l
C:\Users\Yeswanth\Downloads\Sem5\Compilers\CD-Lex-Programs>flex vowels.l
C:\Users\Yeswanth\Downloads\Sem5\Compilers\CD-Lex-Programs>gcc lex.yy.c
C:\Users\Yeswanth\Downloads\Sem5\Compilers\CD-Lex-Programs>a.exe
Enter the string.. at end press^d
yeswanth

No. of vowels=2
No. of consonants=6
```

3. Lex program to count number of lines in given input

```
%{
#include<stdio.h>
int lc=0,cc=0;
%}

%%
[\n] { lc++; cc+=yyleng;}
%%

int main(int argc ,char* argv[ ])
{
    printf("Enter the input:\n");
    yylex();
    printf("The number of lines=%d\n",lc);
}

int yywrap( )
{
    return 1;
}
```

Output:

```
Enter the input:
this is yeswanth
from srm university
btech 3rd year
cse
The number of lines=4
```

```
Enter the input:
dfghjk
hj,
hjk
^D
The number of lines=4
```

4. Lex Program To Recognize A String With Three Consecutive 0's

Code:

```
%%  
[0-9]*000[0-9]* { printf("string accepted");}  
[0-9]* { printf("string rejected");}  
%%  
main()  
{  
yylex();  
}\br/>int yywrap()  
{  
return 1;  
}
```

Output:

345000

string accepted

34560

String is rejected