

[2CEIT701: COMPILER DESIGN]

AIM - Write a Lex program to validate arithmetic expressions and display a separate list of the identifiers and operators.

Submitted By: Shiv Patel
Enrollment number: 19012011136
Class: CEIT-A
Batch: AB4



Department of Computer Engineering (CEIT-A)

Practical-4

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CODE:

```
% {
#include<stdio.h>
#include<string.h> int
flag=0,i=0,j,k=0;
char operand[20][20],oparator[20][20];
% }

%%

[a-zA-Z0-9]+ {flag++; strcpy(operand[i],yytext); i++;}
[-+*/] {flag--; strcpy(oparator[k],yytext); k++;}
%%

int main(int argc, char* argv[])
{
    printf("enter an arithmetic expression\n");
    yylex();

    if(flag!=1)
        printf("Invalid expression\n");
    else
    {
        printf("Valid expression\n");

        printf("The operands are\t");
        for(j=0;j<i;j++)
            printf("%s\t",operand[j]);

        printf("\nThe operators are\t");
        for(j=0;j<k;j++)
            printf("%s\t",oparator[j]);

        printf("\n");
    }
}
```

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

OUTPUT

```
"p4.1" 37L, 810C written
19012531016@telnetserver:~$ lex p4.1
19012531016@telnetserver:~$ gcc lex.yy.c
19012531016@telnetserver:~$ ./a.out
enter an arithmetic expression
a+b*c

Valid expression
The operands are      a      b      c
The operators are      +      *

19012531016@telnetserver:~$ a_
a_: command not found
19012531016@telnetserver:~$ ./a.out
enter an arithmetic expression
a_
_
Valid expression
The operands are      a
The operators are
```