Sample Input and Output:

Enter Arithmetic Expression: 5+3*2 Result=11

Entered arithmetic expression is Valid

Code:

calc.l

```
%{
#include<stdio.h>
#include "y.tab.h"
extern int yylval;
%}

%%
[0-9]+ {
yylval atoi(yytext);
return NUMBER;
}

[\t] ;

[\n] return 0;
return yytext[0];

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

calc.y

```
%{
/* Definition section */
#include<stdio.h>
int flag=0;
%}

%token NUMBER
%left '+' '-'
%left '*' '/' '%'
%left '(' ')'

/* Rule Section */
```

```
%%
Arithmetic Expression: E{
printf("\nResult=%d\n", $$);
return 0;
};

E:E'+'E {$$=$1+$3;}

|E'-'E {$$=$1-$3;}

|E''E {$$=$1$3;}

|E'/'E {$$=$1/$3;}

|E'%'E {$$=$1%$3;}

['('E')' {$$=$2;}

| NUMBER {$$=$1;};

%%

void main()
{
printf("\nEnter Arithmetic Expression:\n");
yyparse();
if(flag==0)
printf("\nEntered arithmetic expression is Valid\n\n");
}

void yyerror()
{
printf("\nEntered arithmetic expression is Invalid\n\n");
flag=1;
}
```

OUTPUT:

```
C:\Users\ramas\Desktop\pcd4>flex express.l

C:\Users\ramas\Desktop\pcd4>bison -dy express.y

C:\Users\ramas\Desktop\pcd4>gcc lex.yy.c y.tab.c

C:\Users\ramas\Desktop\pcd4>a.exe
Enter the expression
22+120*(9-2)
Result = 862
```