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| **Implementation of Calculator** |
| **Aim:**LEX and YACC program to implement a calculator. |
| **Program**  **Lex Program**  %{  #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;  }  **Yacc Program**  %{  #include<stdio.h>  int flag=0;  %}  %token NUMBER  %left '+' '-'  %left '\*' '/' '%'  %left '(' ')'  %%  ArithmeticExpression: 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 the expression \n");  yyparse();    }  void yyerror()  {  printf("\nEntered arithmetic expression is Invalid\n\n");  flag=1;  } |
| **Result:** Implemented a LEX and YACC program to implement a calculator. |
| **Remarks:**(To be filled by faculty) |
| **Algorithm**  **Lex Program**   1. Start 2. In rules part separate numbers. 3. Stop   **Yacc Program**   1. Start 2. In rules part perform the specified arithmetic expression to get the result. 3. Display result and print invalid if the expression entered is invalid. 4. Stop   **Sample Input and Output** |