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Q. Write YACC program to draw parse tree for arithmetic expression

$S \rightarrow E$
$E \rightarrow E+E$
$E \rightarrow E-E$
$E \rightarrow num$

Sol. file.l // flex file or prog.

```
%{
  #include "y.tab.h"
    extern yylval;
%}

[0-9]+ {yylval= atoi(yytext);
        return num;
       }
\n  { return 0; }
.   { return yytext[0]; }

int main()
{
  yylex();
}

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

file.y // YACC prog.

```
%{
   #include <stdio.h>
%}
% token num
% left '+' '-'
%%
S:E  { printf ("S→E"); }
E: E'+'E { printf ("E→E+E"); }
 |E'-'E { printf ("E→E-E"); }
 |num { printf ("E→num"); }

void main()
{
  printf ("Enter expr.:");
  yyparse();
}
```

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commands to run in cmd :-

→ ls
→ flex file.l
↳ ls
→ yacc -d file.y
↳ ls
→ yacc -v file.y
↳ gcc lex.yy.c y.tab.c
↳ y.out