

**SSN COLLEGE OF ENGINEERING, KALAVAKKAM**  
**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**  
**Compiler Lab - UCS 1602**

**Programming Assignment-4 - Recursive Descent Parser using C**

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Write a program in C to construct Recursive Descent Parser for the following grammar which is for arithmetic expression involving + and \*. Check the Grammar for left recursion and convert into suitable for this parser. Write recursive functions for every non-terminal. Call the function for start symbol of the Grammar in main().

**G:  $E \rightarrow E+T \mid T$**   
 **$T \rightarrow T * F \mid F$**   
 **$F \rightarrow i$**

Extend this parser to include division, subtraction and parenthesis operators

**G:  $E \rightarrow E+T \mid E-T \mid T$**   
 **$T \rightarrow T * F \mid T / F \mid F$**   
 **$F \rightarrow (E) \mid i$**