School of CET

System Software and Compiler Design

BTech CSE

Assignment No.6

Title: Implementing recursive descent parser for arithmetic Construct (Statement).

Aim: Implement Recursive Descent parser for given grammar.

E → E + T | T

T → T * F | F

F → (E) |id

Objective:

1. To study parsing phase in the compiler.
2. To study types of parsers – top down and bottom up.
3. Problems encountered during top down parser.
4. How to write a top down parser.

Theory: Write in brief for following:

1. CFG, non-terminals, terminals, productions, derivation sequence.

2. Introduction to Recursive Descent Parser.

FAQs:

Q.1 Write and explain elimination of Left recursion with example.

Q.2 Eliminate the immediate left recursion.

E → E + T | T

T → T * F | F

F → (E) |id

Input: String satisfying given grammar, string not satisfying given grammar to test error condition.

Output: Success for correct string, Failure for syntactically wrong string.

Conclusion: The recursive descent parser is successfully

implemented.

Platform: Linux (C/C++/JAVA)