

SSN COLLEGE OF ENGINEERING, KALAVAKKAM
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Compiler Design Lab – CS6612

**PROGRAMMING ASSIGNMENT 8 – Type checking and Type conversion for arithmetic
expression using syntax directed translation in Yacc**

Date of Assignment: 02.03.18

Due Date: 02.03.18 & 05.03.18

The objective of this assignment is to print the type of the given expression by checking the types of the operands for every intermediate operation. Use implicit type conversions for the following:

- integer to float
- float to double

Write SDT to check the types of operands. If the types are not equal, perform type conversions only for the given type conversions. If the types are other than the given implicit type conversions, report an error, otherwise continue with the evaluation of types. If the token is number the type is integer.

Considering the grammar below:

G: $E \rightarrow E+E$
 $E \rightarrow E-E$
 $E \rightarrow E * E$
 $E \rightarrow E / E$
 $E \rightarrow E == E$
 $E \rightarrow (E)$
 $E \rightarrow \text{number} \mid \text{float} \mid \text{char}$

Test Cases:

Test your code with the following test cases

3 == 5
34 == 43
(4+6) == 90
4+5
(4.3+8.7)