

SSN COLLEGE OF ENGINEERING, KALAVAKKAM
DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
Compiler Design Lab – CS6612

Programming Assignment 10 – Construction of DAG for the input TAC sequences

Due Date: 23.03.18 & 24.03.18

The objective of this assignment is to construct Directed Acyclic Graph (DAG) from a set of Three Address Code (TAC) statements. Read each statement to construct a subtree that takes the operator as the root and the operands as its children and consider left end variable as label to the root. For example, create sub tree with '*' as root with children 4 and i and attach label t1 for '*' node for the TAC statement t1=4*i, While creating a node, check if the node exists already. If it does not exist, create a new node, otherwise utilize the existing node.

Example TAC Sequence

- (1) t1=4*i
- (2) t2=a[t1]
- (3) t3=4*i
- (4) t4=b[t3]
- (5) t5=t2*t4
- (6) t6=prod+t5
- (7) prod=t6
- (8) t7=i+1
- (9) i=t7

DAG Representation of the Example TAC Sequence

