

CS 536 HW 4

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$\text{program} \rightarrow \text{main}() \{ \text{stmtList} \}$	$\text{program.trans} = \text{stmtList.trans}$
$\text{stmt} \rightarrow \text{PRINT} (\text{exp}) ;$	$\text{stmt.trans} = 1$
$\text{stmt} \rightarrow \text{ID} = \text{exp} ;$	$\text{stmt.trans} = 0$
$\text{stmt} \rightarrow \text{FOR} (\text{ID} = \text{INT_LITERAL} ; \text{ID} < \text{INT_LITERAL} ; \text{ID} ++) \text{stmt}$	$\text{stmt.trans} = \text{INT_LITERAL2.value} - \text{INT_LITERAL1.value}$
$\text{stmt} \rightarrow \text{IF} (\text{exp}) \text{stmt}$	$\text{stmt1.trans} = \text{stmt2.trans}$
$\text{stmt} \rightarrow \text{IF} (\text{exp}) \text{stmt} \text{ ELSE } \text{stmt}$	$\text{stmt1.trans} = \max \{ \text{stmt2.trans}, \text{stmt3.trans} \}$
$\text{stmt} \rightarrow \{ \text{stmtList} \}$	$\text{stmt.trans} = \text{stmtList.trans}$
$\text{stmtList} \rightarrow \text{stmt}$	$\text{stmtList.trans} = \text{stmt.trans}$
$\text{stmtList} \rightarrow \text{stmt} \text{ stmtList}$	$\text{stmtList1.trans} = \text{stmt.trans} + \text{stmtList2.trans}$
$\text{exp} \rightarrow \dots$	$\text{exp.trans} = 0$ // by assumption

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