

Part-C

2] $\text{Var1} = \text{Var2} * \text{Var3} ? \text{Var4} / \text{Var5}$

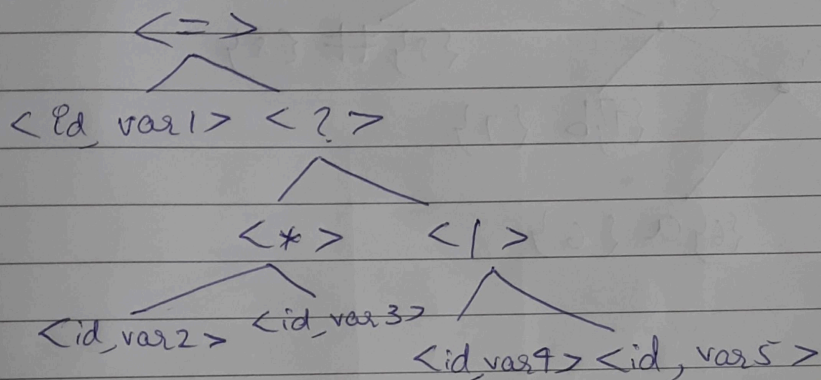
Given $\text{Var5} = 60$.

~~$\text{Var1} = \text{Var2} * \text{Var3} ? \text{Var4} / 60$~~

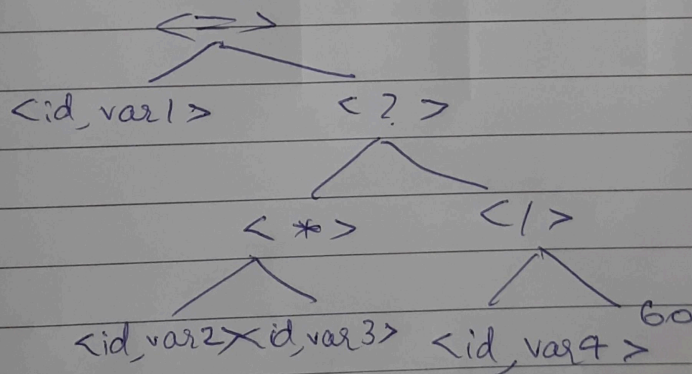
(i) Lexical Analysis:

$\langle \text{id}, \text{var1} \rangle \langle \text{id}, \text{var2} \rangle (*) \langle \text{id}, \text{var3} \rangle \langle ? \rangle$
 $\langle \text{id}, \text{var4} \rangle \langle / \rangle \langle \text{id}, \text{var5} \rangle$

(ii) Syntax Analysis:



(iii) Semantic Analysis:



(iv) Intermediate Code generator:

$t_1 = \text{var5} = 60$

$t_2 = \langle \text{id}, \text{var4} \rangle * t_1$

$\text{id}_1 = t_2$

(v) Code Optimizer:

$$t_1 = id_4 / 60$$

$$id_1 = t_1$$

(vi) Code generation.

LOAD id_1, R_0

DIV $R_0, \#60$

STR R_0, id_1