

ÖDEV 1

- 1) Mercur grammar:
- $$\begin{aligned}\langle \text{assign} \rangle &\rightarrow \langle \text{id} \rangle = \langle \text{expr} \rangle \\ \langle \text{id} \rangle &\rightarrow \text{A|B|C} \\ \langle \text{expr} \rangle &\rightarrow \langle \text{expr} \rangle + \langle \text{term} \rangle \mid \langle \text{term} \rangle \\ \langle \text{term} \rangle &\rightarrow \langle \text{term} \rangle * \langle \text{factor} \rangle \mid \langle \text{factor} \rangle \\ \langle \text{factor} \rangle &\rightarrow (\langle \text{expr} \rangle) \mid \langle \text{id} \rangle\end{aligned}$$

⇒ Bu on topama son yapılıyor yani * öncelikli

⇒ $\text{expr} \rightarrow \text{expr} + \text{term}$ olduğundan sol birleşimlidir.

Düzenlenmiş hal:

- $$\begin{aligned}\langle \text{assign} \rangle &\rightarrow \langle \text{id} \rangle = \langle \text{expr} \rangle \\ \langle \text{id} \rangle &\rightarrow \text{A|B|C} \\ \langle \text{expr} \rangle &\rightarrow \langle \text{term} \rangle + \langle \text{expr} \rangle \mid \langle \text{term} \rangle \\ \langle \text{term} \rangle &\rightarrow \langle \text{factor} \rangle * \langle \text{term} \rangle \mid \langle \text{factor} \rangle \\ \langle \text{factor} \rangle &\rightarrow (\langle \text{expr} \rangle) \mid \langle \text{id} \rangle\end{aligned}$$

$\langle \text{expr} \rangle \rightarrow \langle \text{expr} \rangle + \langle \text{term} \rangle$ 'i $\langle \text{expr} \rangle \rightarrow \langle \text{term} \rangle + \langle \text{expr} \rangle$ yaptık
bu değişiklikle right associative (sağ birleşimli" oldu)

$\langle \text{term} \rangle \rightarrow \langle \text{term} \rangle * \langle \text{factor} \rangle$ idi. $\langle \text{term} \rangle \rightarrow \langle \text{factor} \rangle * \langle \text{term} \rangle$ yaparak
" + " işlemini " * " den öncelikli hale getirdik

2) a. $A = A * (B + (C * A))$

b. $B = C * (A * C + B)$

c. $A = A * (B + (C))$

Grammar :

$\langle \text{assign} \rangle \rightarrow \langle \text{id} \rangle = \langle \text{expr} \rangle$

$\langle \text{id} \rangle \rightarrow A / B / C$

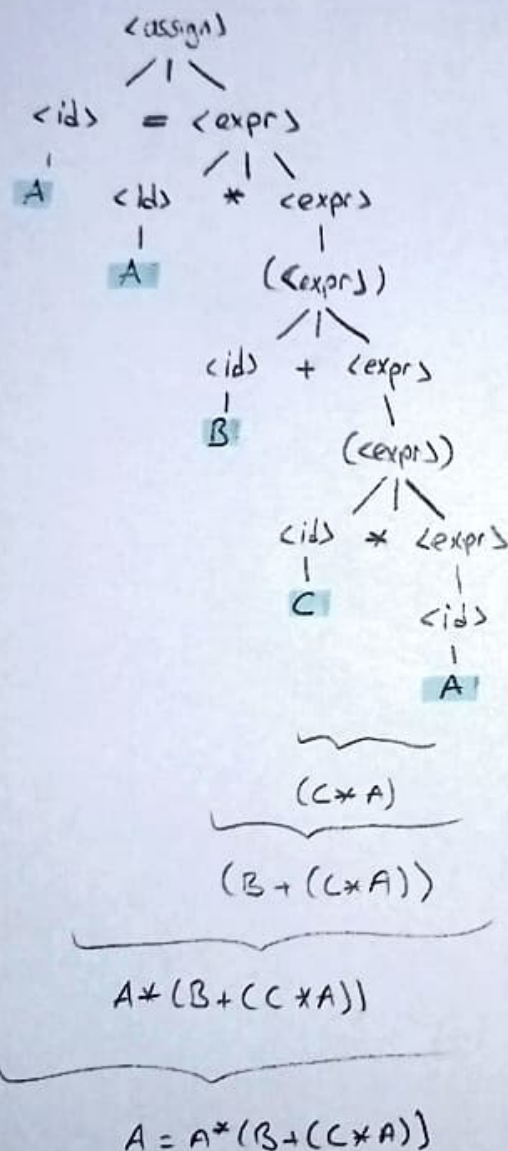
$\langle \text{expr} \rangle \rightarrow \langle \text{id} \rangle + \langle \text{expr} \rangle$

$\quad \quad \quad | \langle \text{id} \rangle * \langle \text{expr} \rangle$

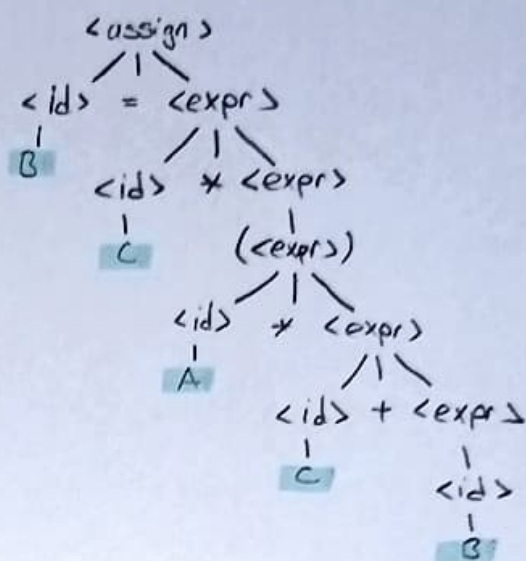
$\quad \quad \quad | (\langle \text{expr} \rangle)$

$\quad \quad \quad | \langle \text{id} \rangle$

a)



b) $B = C * (A * C + B)$



c) $A = A * (B + (C))$

