# Örnek

$$L = \{\, 0^i 1^j 0^k \mid j > i + k \,\}$$

$$j = i + k \text{ için}$$

$$L \text{ dili} = \{\, 0^i 1^i 1^m 1^k 0^k \mid m \geq 1 \,\} \text{olacaktır.}$$

$$\boxed{\begin{array}{c} L_1 = \{\, 0^i 1^i \mid i \geq 0 \,\} \rightarrow A \Rightarrow 0A1 \mid \lambda \\ L_2 = \{\, 1^m \mid m > 0 \,\} \rightarrow B \Rightarrow 1B \mid 1 \\ L_3 = \{\, 1^k 0^k \mid k \geq 0 \,\} \rightarrow C \Rightarrow 1C0 \mid \lambda \end{array}}$$

$$S \Rightarrow ABC$$

$$A \Rightarrow 0A1 \mid \lambda$$

$$B \Rightarrow 1B \mid 1$$

$$C \Rightarrow 1C0 \mid \lambda$$

# Örnek

$$\boxed{\begin{array}{c} S \Rightarrow aSe \mid XY \\ X \Rightarrow aXc \mid b \\ Y \Rightarrow cYe \mid d \end{array}} \qquad \boxed{\begin{array}{c} V_N = \{S, X, Y\} \\ V_T = \{a, b, c, d, e\} \end{array}}$$

*Ağaç Modeli ile* Çözüm

$$a \underbrace{\overset{S}{\leftrightarrow}}_{S} e$$

$$a \underbrace{\leftrightarrow}_{\ldots} e$$

X için;

$$a \overbrace{\underbrace{\leftrightarrow}_{X}}^{X} c$$

$$a \overbrace{\underbrace{\leftrightarrow}_{X}}^{X} c$$

...

$$a^m X c^m$$

$$m \geq 0$$

$Y$ için;

$$c \overbrace{\underbrace{\leftrightarrow}_{Y}}^{Y} e$$

$$c \overbrace{\underbrace{\leftrightarrow}_{Y}}^{Y} e$$

...

$$c^k Y e^k$$

$$k \geq 0$$

# Örnek

$$L = \left\{ a^{2k} \underbrace{b^n c^{2n}}_{A} d^k \;\middle|\; k \geq 1, n \geq 1 \right\}$$

$$S \Rightarrow aaSd \mid aaAd$$

$$A \Rightarrow bAcc \mid bcc$$

# Örnek

$$L = \{ a^{n+m} b^k c^{m+k} d^{2n} \mid n, m, k \geq 0 \}$$

*Bunu şu şekilde de yazabiliriz ve yanlış olmaz.*

$$a^n a^m b^k c^m c^k d^{2n}$$

$$\underbrace{a^n\ d^{2n}}_{S \Rightarrow aSdd\ \mid A}$$

*Şimdi arada kalanlar için;*

$$\underbrace{a^m c^m}_{A \Rightarrow aAc\ \mid B}$$

$$\underbrace{b^k c^k}_{B \Rightarrow bBc\ \mid \lambda}$$