

7/14/20 (10/30 P) CFG = PDA.

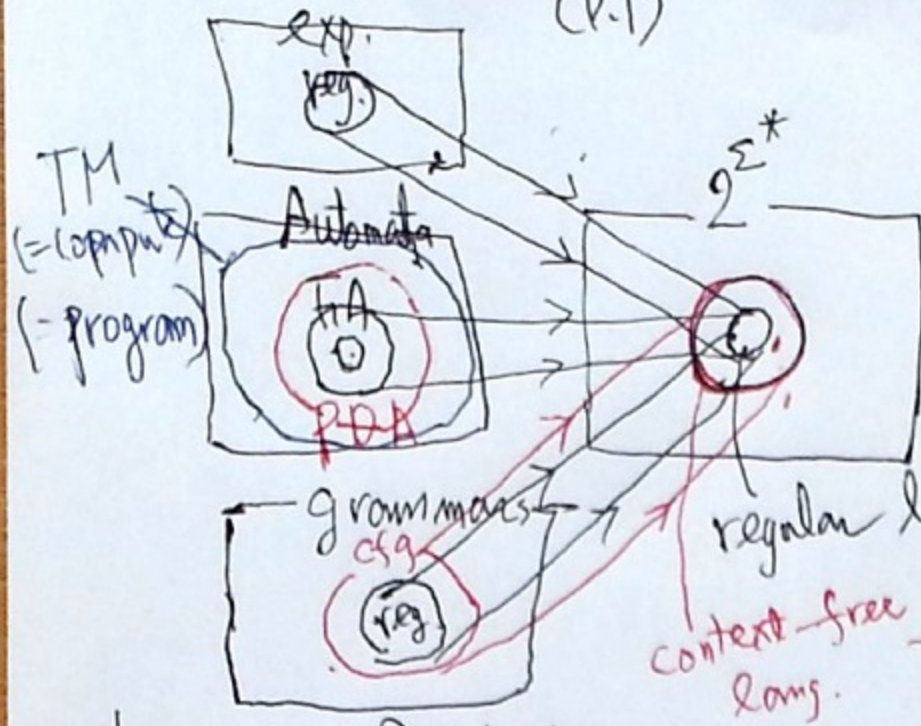
\Rightarrow^* , \Rightarrow_{em}^* , \Rightarrow_{rm}^* , Δ are same / ambiguous (OHPHOTU)
 $G = (N, \Sigma, P, S)$
 (P.T)

iii) reg. grammar - type 3

$A \rightarrow \alpha B$ or $A \rightarrow \alpha \in P$. $A, B \in N, \alpha \in \Sigma^*$

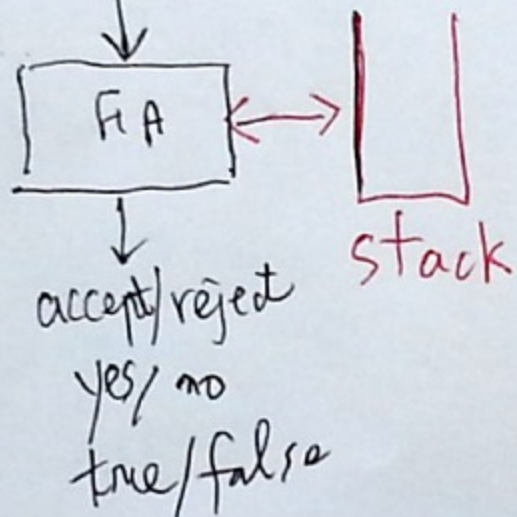
ii) context-free grammar

$A \rightarrow \alpha \in P$, $A \in N, \alpha \in (N \cup \Sigma)^*$



Chap. 6. Pushdown Automata (PDA) = FA + stack.

input string



no memory except states.

$O(1) < O(m) < O(m^2) < \dots < O(2^n) \dots$
 $O(\log m)$ $O(n \log n)$
 ~~$O(2^n)^2 \dots$~~