

CSCI 2670 Fall 2008

Class method CFG-to-PDA (extended)  
PDA

Given any CFG  $G = (V, \Sigma, P, S)$

let  $\bar{M} = M(G)$  be the PDA

$M = (\{i, f\}, \Sigma, \Sigma \cup V, \delta, i, \{f\})$  where

$\delta(i, \lambda, \lambda) = \{[f, S]\}$ ,

$\delta(f, \lambda, A) = \{[f, w] : A \rightarrow w \in P\}$  for all  $A \in V$ ,

$\delta(f, a, a) = \{[f, \lambda]\}$  for all  $a \in \Sigma$ ,

and all other values of  $\delta$  are  $\emptyset$ .

Ex  $G: S \rightarrow FS \mid \lambda$   
 $F \rightarrow aSb \mid ab$

$M(G):$

