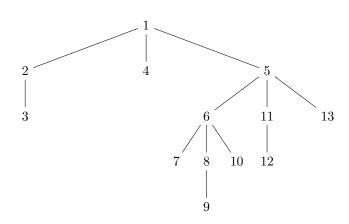
## NOTES ON STACKS AND DEPTH FIRST SEARCH

ERIC MARTIN



Popping a path from the top of the stack (right of list) and pushing its extensions from right to left to the top of the stack.

[[1]]

$$[[1,5],[1,4]] [1,2]$$

$$[[1,5],[1,4]]$$
  $[1,2,3]$ 

$$[1,5]$$
 
$$[1,4]$$

$$[] \qquad \qquad [1,5]$$

$$\big[[1,5,13],[1,5,11]\big] \hspace{1.5cm} [1,5,6]$$

$$\big[[1,5,13],[1,5,11],[1,5,6,10],[1,5,6,8],[1,5,6,7]\big]$$

$$[[1,5,13],[1,5,11],[1,5,6,10],[1,5,6,8]]$$
  $[1,5,6,7]$ 

$$\big[[1,5,13],[1,5,11],[1,5,6,10]\big] \hspace{3cm} [1,5,6,8]$$

$$[[1,5,13],[1,5,11],[1,5,6,10],[1,5,6,8,9]]$$

$$\big[[1,5,13],[1,5,11],[1,5,6,10]\big] \hspace{3cm} [1,5,6,8,9]$$

$$[[1,5,13],[1,5,11]]$$
  $[1,5,6,10]$ 

$$[[1,5,13]]$$
  $[1,5,11]$ 

$$[1,5,13]$$
 
$$[1,5,13],[1,5,11,12]]$$

$$[1, 5, 13]$$
 [1, 5, 11, 12]

$$[1,5,13]$$

COMP9021 Principles of Programming