

Computing FIRST, FOLLOW, and nullable (2)

repeat

for each production $X := Y_1 Y_2 \dots Y_k$

if $Y_1 \dots Y_k$ are all nullable (or if $k = 0$)

set nullable[X] = true

1

for each i from 1 to k and each j from $i + 1$ to k

if $Y_1 \dots Y_{i-1}$ are all nullable (or if $i = 1$)

add FIRST[Y_i] to FIRST[X]

2

if $Y_{i+1} \dots Y_k$ are all nullable (or if $i = k$)

add FOLLOW[X] to FOLLOW[Y_i]

3

if $Y_{i+1} \dots Y_{j-1}$ are all nullable (or if $i+1=j$)

add FIRST[Y_j] to FOLLOW[Y_i]

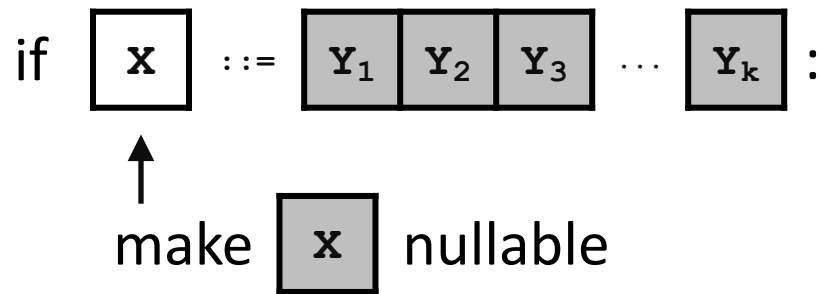
4

Until FIRST, FOLLOW, and nullable do not change

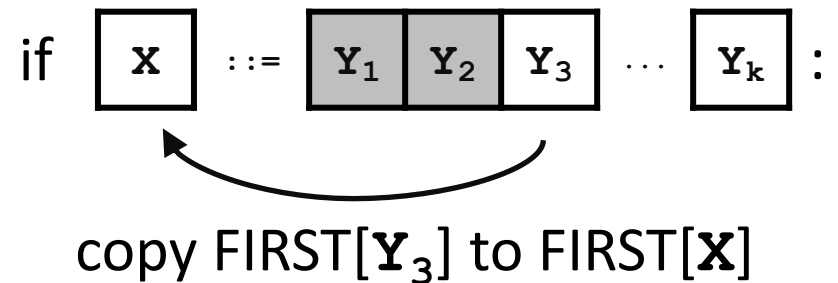
Computing FIRST, FOLLOW, & nullable (3)

\boxed{Y} = nullable

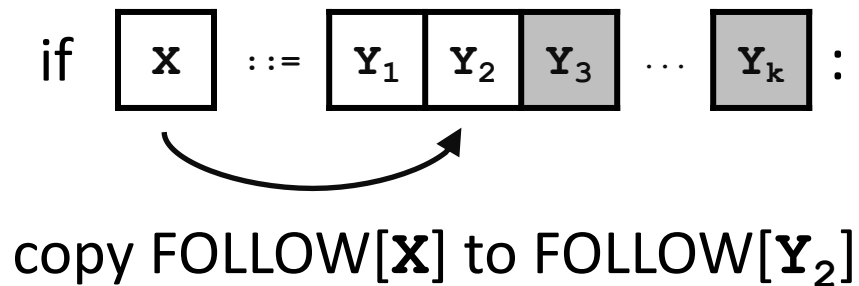
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②



③



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