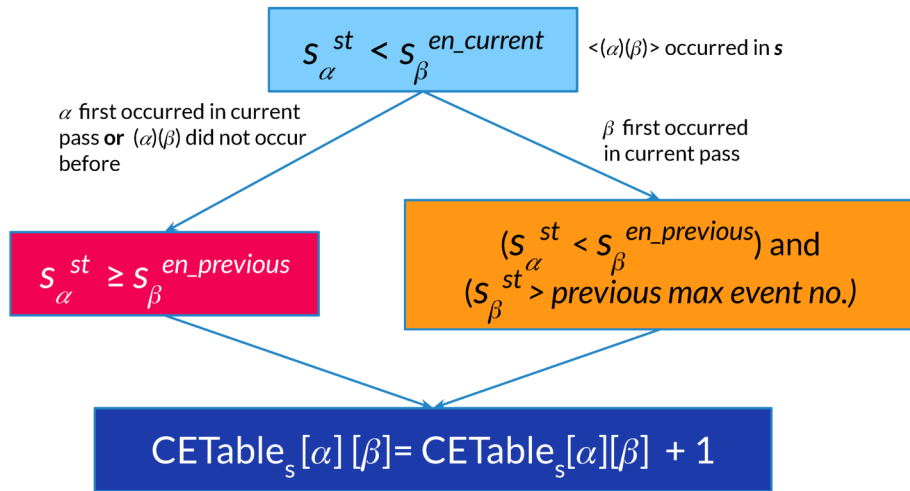


For a sequence  $s$ , for each new symbol  $\alpha$ , for each new symbol  $\beta$ ,



(a)

For a sequence  $s$ , for each new symbol  $\alpha$ ,

Set bit denotes all  $(\beta\alpha)$  combinations

$$unique_{bits} = bitset_{\alpha}^{previous} \text{ XOR } bitset_{\alpha}^{current}$$

Set bit denotes new  $(\beta\alpha)$  combinations

$$same\_event = unique_{bits} \text{ AND } bitset_{\alpha}^{current}$$

For each set bit/symbol  $\beta \in same\_event$ :

$$CETable_i[\beta][\alpha] = CETable_i[\beta][\alpha] + 1$$

(b)