

DP algorithm to determine if $x \in L$

Computing the array $M[1\dots n]$ where $n > 2$ is the length of x :

- ▶ $M[1] := [x[1] = 1]$
- ▶ $M[2] := [(x[1] = 1) \wedge (x[2] = 0)]$
- ▶ For $i := 3$ up to n , we set $M[i] = \text{True}$ if and only if at least one of the following is *True*:
 - ▶ $M[i - 1] \wedge (x[i] = 0)$
 - ▶ $M[i - 2] \wedge (x[i] = 0) \wedge (x[i - 1] = 1)$

What are the entries of M when $x = 110$? What about $x = 100$?