91. - Base case:

"" → "" : numDecodings("") = 1

"3" → "C" : numDecodings("3") = 1

"06" → error : numDecodings("06") = 0

- Notice this problem is about the number of ways. Think about breaking down this problem, u will have:

- numDecodings("12345") = numDecodings("2345") + numDecodings("345")

"1" + ["2345"]

"12" + ["345"]

- numDecoding("27345") = numDecodings("7345") since 27 > 26 = 0

- numDecoding("20345") = numDecodings("0345") + numDecodings("345")

Date

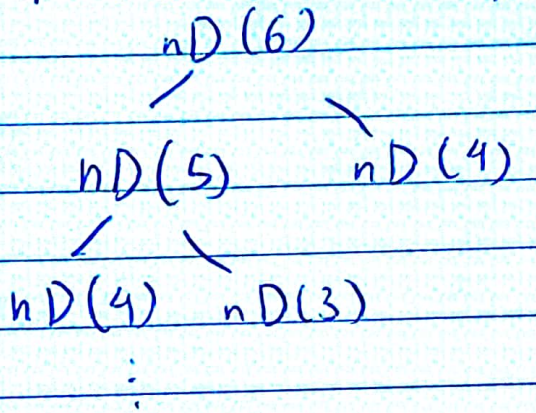
- To improve this solution:
  we notice

numDecodings("12345")
= numDecodings("2345") + numDecodings("345")
= numDecodings("345") + numDecodings("45")
+ numDecodings("345")

↘ duplication → ~~remind~~ remind of Fiborancci optimization aka memoization.

→ Use an array to store previous result.

★ Unimproved code time complexity: $O(2^n)$



★ Improved code time complexity: $O(n)$