

Method 1: dynamic programming.

State transition equation:

to reach current position, need one jump

$$f(i) = \max(f(i-1), \text{nums}[i-1]) - 1$$

max. jumps leftover from previous state

no. of jumps from previous position

input:

nums = [2, 3, 1, 1, 4]

$$f(0) = 0$$

$$f(1) = \max(0, 2) - 1 = 1$$

$$f(2) = \max(1, 3) - 1 = 2$$

$$f(3) = \max(2, 1) - 1 = 1$$

$$f(4) = \max(1, 1) - 1 = 0$$

path: 2 - 3 - 4

Method 2: greedy algorithm.

input:

nums = [2, 3, 1, 1, 4]

leftmost = 4

$i = 5 - 2 = 3$  :  $3 + 1 \geq 4$  , leftmost = 3

$i = 2$  :  $2 + 1 \geq 3$  , leftmost = 2

$i = 1$  :  $1 + 3 \geq 2$  , leftmost = 1

$i = 0$  :  $0 + 2 \geq 1$  , leftmost = 0