NOVEMBER 28, 2011

$$M[j] = \max\{ \underbrace{v_j + M[p(j)]}_{j \in \theta[j]},\ \underbrace{M[j-1]}_{j \notin \theta[j]} \}$$

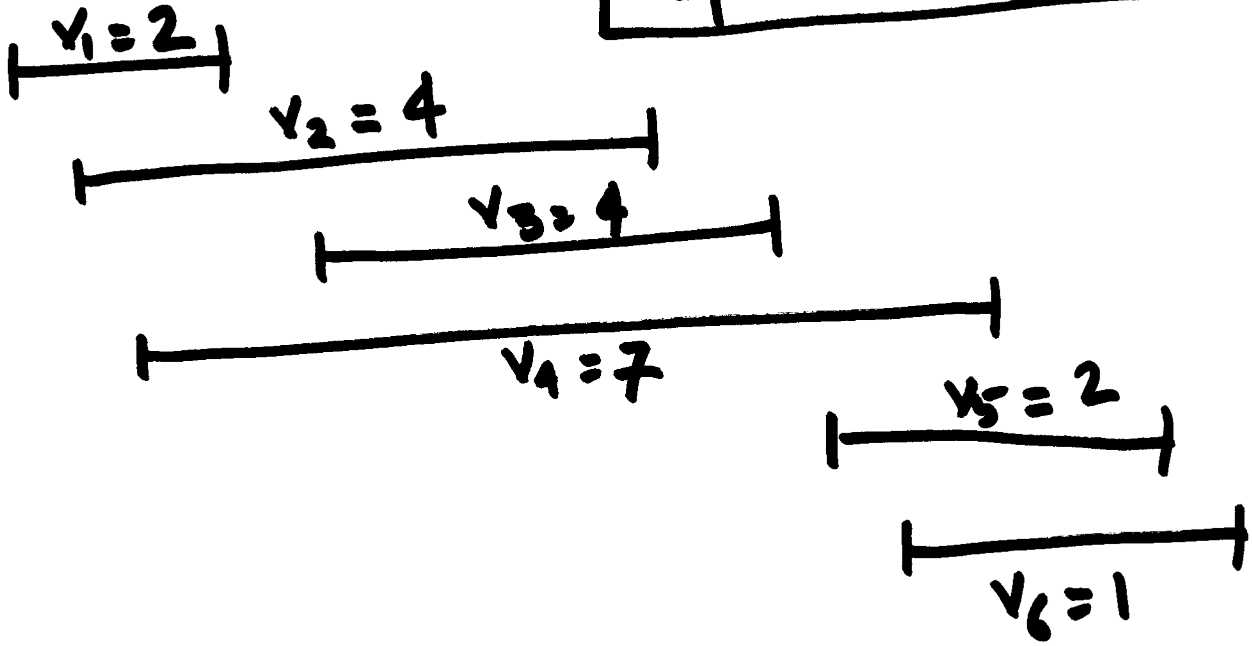
for $j = 1 \ldots n$

incorrect! If $v_j + M[p(j)] > M[j-1]$

Output j.

$p(j)$ = largest $i < j$ s.t. i & j don't conflict. If no-such i, $p(j) = 0$

$p(j)$	j
0	1
0	2
1	3
0	4
3	5
3	6



0	1	2	3	4	5	6
0	2	4	6	7	8	8

$M[1] = \max\{2 + M[0],\ M[0]\}$

$M[2] = \max\{4 + M[0],\ M[1]\}$

$M[3] = \{4 + M[1],\ M[2]\}$

$4 + 2,\ 4$

$M[4] = \{7 + M[0],\ M[3]\}$

$M[5] = \{2 + M[3],\ M[4]\}$

$2 + 6,\ 7$

$M[6] = \{1 + M[3],\ M[5]\}$

$1 + 6,\ 8$

~~1 2 3 4 5 6~~

1 ~~2~~ 3 ~~4~~ 5 ~~6~~

Recursive-Opt(j)

If $j = 0$ return

If $v_j + M[p(j)] > M[j-1]$

Output j followed by Recursive-Opt$(p(j))$

else

Output Recursive-Opt$(j-1)$

Ex.: Iterative version.