CLRS 15-7

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September 25, 2008

Thanks, Brian D. Carlstrom [1]. Let $T[i,t]$ be the profit based on completing the ith job at time t. Initially:

$$T[1,t] = \begin{cases} t \neq t_1 \rightarrow 0 \\ t = t_1 \leq d_1 \rightarrow p_1 \\ t = t_1 > d_1 \rightarrow 0 \end{cases}$$

Thereafter:

$$T[1,t] = \max \begin{cases} \text{true} \rightarrow T[i-1,t] \\ t \leq d_i \rightarrow T[i-1,t-t_i] + p_i \\ t > d_i \rightarrow T[i-1,t-t_i] \end{cases}$$

Also, $R[i,j]$ should record the choice of cell which maximized the apposite expression.

References

[1] Brian D. Carlstrom. Problem Set #4 Solutions. `http://carlstrom.com/stanford/cs161/ps4sol.pdf`, 2004.