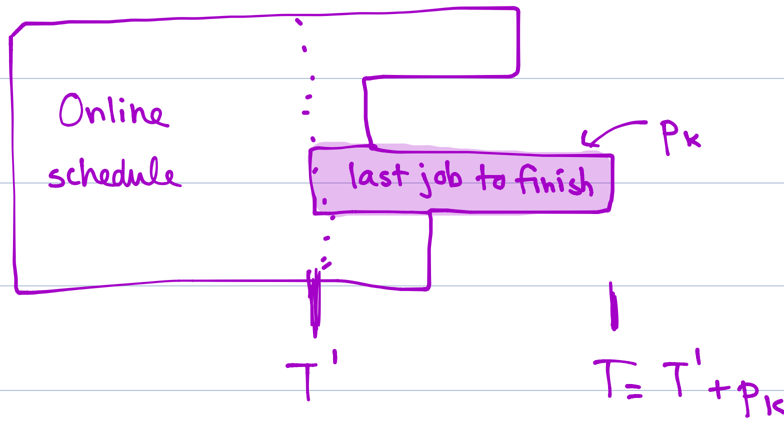
Scheduling

n jobs $p_1, p_2, \ldots p_n$



$OPT \geq \sum_{j=1}^{n} p_j / m$

$OPT \geq p_k$

$$T \leq T' + p_k$$

$$\leq \frac{\sum_{j \neq k} p_k}{m} + p_k$$

$$\leq OPT - \frac{p_k}{m} + p_k$$

$$\leq OPT\left(2 - \frac{1}{m}\right)$$

List update

Model 1 - original	Model 2
cost to access item at depth i = i	cost to access item at depth i = i
free to move forward by any amount	required to move to front
adjacent items can be exchanged at cost of 1	adjacent items can be exchanged at cost of 1

OPT(σ) opt alg in model 1

OPT' : simulates OPT

$$OPT'(\sigma) \le 2\, OPT(\sigma)$$

$$OPT\text{-}Model2(\sigma) \le OPT'(\sigma)$$

$$MTF(\sigma) = OPT\text{-}Model2(\sigma)$$

no advantage to paid exchanges
"exchange argument"