AlgoExpert   Quad Layout   JavaScript   12px   Sublime   Monokai   00:00:00

Prompt   Scratchpad   Our Solution(s)   Video Explanation   Run Code

Solution 1   Solution 2

```javascript
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// O(nk) time | O(n) space
function maxProfitWithKTransactions(prices, k) {
  if (!prices.length) return 0;
  const evenProfits = new Array(prices.length).fill(0);
  const oddProfits = new Array(prices.length).fill(0);
  for (let t = 1; t < k + 1; t++) {
    let maxThusFar = -Infinity;
    let currentProfits, previousProfits;
    if (t % 2 === 1) {
      currentProfits = oddProfits;
      previousProfits = evenProfits;
    } else {
      currentProfits = evenProfits;
      previousProfits = oddProfits;
    }
    for (let d = 1; d < prices.length; d++) {
      maxThusFar = Math.max(maxThusFar, previousProfits[d - 1] - prices[d - 1]);
      currentProfits[d] = Math.max(currentProfits[d - 1], maxThusFar + prices[d]);
    }
  }
  return k % 2 === 0 ? evenProfits[prices.length - 1] : oddProfits[prices.length - 1];
}

exports.maxProfitWithKTransactions = maxProfitWithKTransactions;
```