

Minimum Energy Stair Climbing

Kwankamol Nongpong, Ph.D.

CSX3009 Algorithm Design

Department of Computer Science

Assumption University

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- A delivery robot must climb a staircase with n steps. Each step has an associated energy cost to step on.
- The robot can either climb 1 step or 2 steps at a time.
- When it steps on a stair, it has to pay the energy cost of that stair.
- **Goal:** Find the minimum total energy to reach the top of the staircase.

Example

- $N = 10$
- $\text{cost} = [1, 100, 1, 1, 1, 100, 1, 1, 100, 1]$
- Optimal path
 - Step of the stairs: $0 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 6 \rightarrow 7 \rightarrow 9$
 - Cost: $1 + 1 + 1 + 1 + 1 + 1 + 1 = 7$