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[Awesome Compony]

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DSA - Greedy

A pile of gold coins

Description automatically generated

Contents

[1. Furthest building you can reach 2](#_Toc159800624)

[Intuition 2](#_Toc159800625)

[complexity 2](#_Toc159800626)

# [Furthest building you can reach](https://leetcode.com/problems/furthest-building-you-can-reach)

## Intuition

Since we have to reach the furthest we can use bricks for small jumps and ladders for big jumps, so we have to be greedy

When using a min heap we insert the any difference between the 2 buildings, and min heap will sort it keeping the lowest at the top

Now once the min heap length becomes greater than the ladders, its like we have exhausted the ladders and now we have to use the bricks

Why the items inside min heap are like ladders

* Because whatever that we are going to pop is the smallest number and whatever stays in the min heap is like we are using the ladders for it

So once we have exhausted all the bricks, return the I – 1

Why I – 1, because we did not make it to the ith building

## Complexity

TC – O(N)

SC – O(N)

## [Solution](https://leetcode.com/problems/furthest-building-you-can-reach/solutions/4780362/priority-queue-heap-solution-on-log-n/)