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Chapter 1

June 2021

1.1 Longest Palindromic Substring

I solved this using dynamic programming.

Basic solution is that:

1. If $\text{str}[i] == \text{str}[j]$, check whether $\text{str}[i+1, j-1]$ is also palindrome.
2. If not, the longest palindrome could be in $\text{str}[i+1, j]$ or $\text{str}[i, j+1]$.

If bottom-up, each cell $\text{dp}[i][j]$ indicates whether $\text{str}[i, j]$ is a palindrome. Deciding whether $\text{str}[i, j]$ is palindrome needs deciding whether $\text{str}[i+1, j+1]$ is palindrome first.

1.2 Container With most Water

Given an array of height.

Find $\min(\text{height}[i], \text{height}[j]) * (j-i)$ such that is maximum.