Warmup task - Pairsum

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October 6, 2025

Solver

Go through all pairs

- Go through all pairs in the list

- Worst case: $O(n^4)$

Hashing (what we used)

- We iterate over all pairs (i, j) and for every pair we calculate the sum $s = L[i] + L[j]$, which is saved in a hashmap.

- If we later find a pair (i', j'), which add up to the same sum, we check whether the indices are disjunct. If this is the case, the indices are our solution.

- Worst case: $O(n^2)$

Divide and Conquer

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Generator

- Generate max_size random numbers and put them in a list

- Create a pairsum pair

- Create "fake pairs": pairs which are near to being a pairsum instance and roughly the same

- Randomize the list