▨ Topic 1 — Traversal & Basic Logic (7 Problems)

1. Reverse the World

Description: Reverse the order of input integers. Useful to understand loop control and array traversal in reverse.
Input: 21 22 23 24
Output: 24 23 22 21

2. Mini-Max

Description: Find and print both the smallest and largest elements in the array. A basic search task.
Input: 7 3 8 2 6 4 7 1
Output: 1 8

3. Single-Step Rotate

Description: Rotate the array left by one position. This tests shifting logic.
Input: 11 12 13 14 15
Output: 12 13 14 15 11

4. K-Shift Rotate

Description: Left rotate the array by D positions with constant space. Important for mastering rotations.
Input: 1 2 3 4 5 6 & d=3
Output: 4 5 6 1 2 3

5. Mirror Index

Description: Return the element at the middle index (floor of N/2).
Input: 5 9 7 5 3 1
Output: 7

6. Running Sum / Prefix Sum

Description: Convert array to prefix sum form — each element becomes the sum of all previous.
Input: 1 2 3 4
Output: 1 3 6 10

7. Max Difference

Description: Find the maximum value of A[j] - A[i] such that j > i. Return 0 if no profit.
Input: 6 7 1 5 4 3 6
Output: 5

8. Equal Element Pairs

Description: Print all matching element index pairs in the given array

Input: 1 2 3 2 1 3
Output: (0,4)

(1,3)

(2,5)

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