

January 2025, CSE 106
Online on Array (A1/A2)
Time: 35 Minutes

You are working as a software developer for a stock trading company. The company wants to analyze the daily profit and loss from a particular stock over a period of days. The data is represented as an array of integers, where each element indicates the profit (positive number) or loss (negative number) for that day.

Your task is to write a C program that finds the maximum profit that can be achieved within a contiguous sequence of days.

Input: An integer array *stocks* ($-10^9 \leq \text{stocks}[i] \leq 10^9$) of size *n* ($1 \leq n \leq 500$) representing daily profit/loss values.

Output: maximum profit.

Example 1:

Input: $n = 9$, $\text{stocks}[] = \{-2, 1, -3, 4, -1, 2, 1, -5, 4\}$

Output: 6

Explanation: The subarray $\{4, -1, 2, 1\}$ has the largest sum.

Example 2:

Input: $n = 5$, $\text{stocks}[] = \{5, 4, 1, 7, 8\}$

Output: 25