Solve the problem below. You have *30 minutes*. After you are done, rename the file containing your source code as your student ID (so, if your student ID is 2005091, the name of your file should be 2005091.c). Then submit that file to Moodle. Make sure you submit a file containing the source code.

Failure to not follow these instructions will result in penalties.

Problem 1.

Suppose, you are making a journey in which you can jump multiple steps at once. When you jump upwards, you lose energy equal to the amount of steps you have jumped upwards. Similarly, when you jump downwards, you gain energy equal to the amount of steps you have jumped downwards. Your energy remains the same if you stay put.

Write a **C** program that takes as input an **integer array** of **sequential** jumps and calculates the **minimum** energy required prior to that sequence so that you never run out of energy.

Positive integers of the array represent upward steps. Negative ones represent downward steps. 0 refers to you staying put. You run out of energy when your energy is no longer positive.

Sample Input	Sample Output
8 0 2 5 -10 4 3 -12 5	8
7 -2 -1 0 5 2 3 -5	8
6 1 -2 3 -4 5 -6	4

N.B.

- ★ You ***must*** take the inputs to an **array**.
- ★ You ***can not*** use any **global** or **static** variables while solving this problem.
- ★ You ***can not*** use any library function for this task (other than **I/O**).
- ★ You ***can not*** use any **pointer** while solving this problem.
- ★ You ***can*** assume that the provided input will ***always*** be valid.