Triangular Trail(Bonus)

ZPRAC-16-17-Lab8

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[20]*Triangular Trail* (*Bonus*)

Important Note: This Bonus question carries 20 marks and will be graded.

After wrecking Jaikal's evil plans, Shaktimaan needs a power boost, so he goes to the Triangular land. As the name suggests, the place is in the shape of a right angled triangle where each cell contains a power booster (the value of cell represents power received on passing through that cell). Shaktimaan has to cross the triangular land from first row to last row collecting all the power present in the cells he moves through. He has to start from first row and can end at any cell in the last row but once he starts moving, he can only go to the cell directly below the current cell or to the right of the cell present directly below the current cell i.e. if he is in cell (i,j) then he can only move to cell $(i+1,j)$ and $(i+1,j+1)$. Considering Shaktimaan's initial power as zero, find the maximum power he can have after crossing the Triangular land.

Input: First line contains one integer N representing height of the triangle. Next N lines follow with i space separated integers in i^{th} line, representing the power gain on passing through a cell (≥ 0) i.e. first line will have one integer, second line two and so on.
Output: Maximum power shaktimaan can have after moving according to the rules provided in the question.

Example:
Input:
3
1
3 2
10 1 1
Output:
14

Explanation: The path taken will be $1 \longrightarrow 3 \longrightarrow 10$