

CS6102 - COMPUTATIONAL THINKING LAB
(Week 11 – 02.02.2023)

SPOT

1. Write an algorithm for the given problem:

Dhoni and Holidays: Dhoni has n days of vacations! So he decided to go either driving or do his cricket practice. Dhoni knows the following information about each of these n days: whether he can drive his car or not (due to odd-even rule) and whether the cricket academy is open for practice on that day. For the i -th day there are four options:

1. He cannot drive his car and the academy is closed.
2. He cannot drive his car and the academy is open.
3. He can drive his car and the academy is closed.
4. He can drive his car and the academy is open.

On each of these days Dhoni can either have rest or drive his car (if it is possible on this day), or go to academy (if the academy is open on this day).

Find the minimum number of days on which Dhoni will have rest (it means, he will not go driving and academy at the same time). The only limitation that Dhoni has — he does not want to do the same activity on two consecutive days: it means, he will not go for driving on two consecutive days, and academy for practice on two consecutive days.

Input Format

The first line contains a positive integer n ($1 \leq n \leq 100$) — the number of days of Dhoni's holidays.

The second line contains the sequence of integers a_1, a_2, \dots, a_n ($0 \leq a_i \leq 3$) separated by space, where:

a_i equals 0, if on the i -th day of holiday he cannot drive his car and the academy is closed.

a_i equals 1, if on the i -th day of holiday he cannot drive his car and the academy is open.

a_i equals 2, if on the i -th day of holiday he can drive his car and the academy is closed.

a_i equals 3, if on the i -th day of holiday he can drive his car and the academy is open.

Output format

Print the minimum possible number of days on which Dhoni will have rest.