Practice Arena

Practice problems aimed to improve your coding skills.

- PRACTICE-02_SCAN-PRINT
- PRACTICE-03_TYPES
- LAB-PRAC-02_SCAN-PRINT
- LAB-PRAC-01
- PRACTICE-04_COND
- BONUS-PRAC-02
- LAB-PRAC-03_TYPES
- PRACTICE-05_COND-LOOPS
- LAB-PRAC-04_COND
- LAB-PRAC-05_CONDLOOPS
- PRACTICE-07_LOOPS-ARR
- LAB-PRAC-06_LOOPS
  - Fill in the Square
  - Pretty Numbers
  - Block Cipher
  - The Fibonacci Facade
  - Stream AM GM
  - Int on Int
  - Bejewelled Brooch
  - Mobile Mixup
  - Primes are in C
  - Towering Numbers
  - A Run of One
  - Where are the primes-
- LAB-PRAC-07_LOOPS-ARR
- LABEXAM-PRAC-01_MIDSEM
- PRACTICE-09_PTR-MAT
- LAB-PRAC-08_ARR-STR
- PRACTICE-10_MAT-FUN
- LAB-PRAC-09_PTR-MAT
- LAB-PRAC-10_MAT-FUN
- PRACTICE-11_FUN-PTR
- LAB-PRAC-11_FUN-PTR
- LAB-PRAC-12_FUN-STRUC
- LABEXAM-PRAC-02_ENDSEM
- LAB-PRAC-13_STRUC-NUM
- LAB-PRAC-14_SORT-MISC

A Run of One

LAB-PRAC-06_LOOPS

A Run of One [20 marks]

Problem Statement
We will give you a sequence of integers which are guaranteed to be either 0 or 1. The sequence will be ended by a -1. You have to output three quantities as your output on **three different lines**

1. Total number of integers in the sequence, not including the final -1
2. Total number of zeros in the sequence
3. The maximum length of a continuous sub-sequence of 1s in the sequence

Caution

1. Be careful about extra/missing lines and extra/missing spaces in your output.
2. The sequence may be empty (first number may itself be -1) or else the sequence may contain only one integer.
3. Please note the unusual partial grading scheme for this question, given at the bottom.

HINTS: Recall we learnt about running counters and running sums in our earlier discussions. Those may help you solve this problem.

EXAMPLE:
INPUT
0 1 0 0 1 1 1 0 1 1 -1

OUTPUT:
10
4
3
Explanation: There are 10 integers in the sequence (not including the final -1), there are 4 zeros in total, and the continuous sub-sequences containing only 1s are the following (marked using brackets)
0 (1) 0 0 (1 1 1) 0 (1 1) -1
Of these, the longest such sequence is of length 3.

Grading Scheme:
Total marks: **[20 Points]**

There will be partial grading in this question. There are three lines in your output. Printing each line correctly, in the correct order, carries some weightage. The first two lines carry 12.5% weightage each and the last line carries 75% weightage. Each visible test case is worth 2 points and each hidden test case is worth 4 points. There are 2 visible and 4 hidden test cases.

Please remember, however, that when you press Submit/Evaluate, you will get a green bar only if all parts of your answer are correct. Thus, if your answer is only partly correct, Prutor will say that you

have not passed that test case completely, but when we do autograding afterwards, you will get partial marks.

Start Solving! (/editor/practice/6120)