
Deadline

X28191_en

We have a time stamp machine that registers when a signal is emitted. Only the second in which the emission takes place is needed as timestamp (nor the day, nor the hour, nor the minute). The reason is that we know that the time elapsed between two consecutive emissions is at least one second and at most one minute.

For example, if the sequence of timestamps is:

5 20 59 0 55 55

the time elapsed between timestamps 5 and 20 is 15 seconds; between 20 and 59 is 39 seconds; between 59 and 0 is 1 second; between 0 and 55 is 55 seconds; and between 55 and 55 is 60 seconds.

Given a time limit in seconds k and a sequence of timestamps, we want to know the position of the first timestamp that comes out after more than k seconds since the beginning of the emission. Note that the total elapsed time starts from the moment at which the first entry in the sequence appears.

In the example above, if the time limit k is 4, the first timestamp after more than 4 seconds since the beginning of the emission is at the second position, while if the time limit k is 54, the first timestamp after more than 54 seconds since the beginning of the emission is at the fourth position.

The program has to document, code and use the function:

```
int time_lapse(int time_1, int time_2)
```

that given two consecutive timestamps of the input sequence, returns the elapsed time in seconds.

Exam score: 2.500000 **Automatic part:** 30.000000%

Input

A non-negative integer k that represents a time limit in seconds followed by a sequence with two or more timestamps. Each timestamp is an integer between 0 and 59. The time elapsed between two consecutive timestamps is greater than or equal to one second and less than or equal to one minute. After the timestamp sequence, the -1 mark appears.

Output

The position of the first timestamp that comes out after the time limit. If this timestamp does not exist the output will be zero. Note that the total elapsed time is counted from the moment the first signal in the sequence appears.

Sample input 1

```
45
15 20 54 3 21 -1
```

Sample input 2

```
5
15 20 54 3 21 -1
```

Sample output 1

```
4
```

Sample output 2

```
3
```

Sample input 3

```
100
20 25 30 35 55 15 -1
```

Sample output 3

```
0
```

Sample input 4

```
100
25 55 25 55 25 55 25 55 25 55 25 -1
```

Sample output 4

```
5
```

Sample input 5

```
100
25 50 50 30 10 -1
```

Sample output 5

```
4
```

Observation

Do not use vectors to solve this problem.

Problem information

Author : Pro1

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