

Problem E. E

Time limit 2000 ms

Mem limit 1048576 kB

Problem Statement

Takahashi turned on a computer at time 0 and clicked the mouse N times. The i -th ($1 \leq i \leq N$) click was at time T_i .

If he consecutively clicked the mouse at time x_1 and time x_2 (where $x_1 < x_2$), a double click is said to be fired at time x_2 if and only if $x_2 - x_1 \leq D$.

What time was a double click fired for the first time? If no double click was fired, print **-1** instead.

Constraints

- $1 \leq N \leq 100$
- $1 \leq D \leq 10^9$
- $1 \leq T_i \leq 10^9 (1 \leq i \leq N)$
- $T_i < T_{i+1} (1 \leq i \leq N - 1)$
- All values in the input are integers.

Input

The input is given from Standard Input in the following format:

```
N D
T_1 T_2 ... T_N
```

Output

If at least one double click was fired, print the time of the first such event; otherwise, print **-1**.

Sample 1

| Input | Output |
|----------------------------|--------|
| 4 500 300 900 1300 1700 | 1300 |

Takahashi clicked the mouse at time 900 and 1300. Since $1300 - 900 \leq 500$, a double click was fired at time 1300.

A double click had not been fired before time 1300, so 1300 should be printed.

Sample 2

| Input | Output |
|-----------------------------|--------|
| 5 99 100 200 300 400 500 | -1 |

No double click was fired, so print **-1**.

Sample 3

| Input | Output |
|----------------------------|--------|
| 4 500 100 600 1100 1600 | 600 |

If multiple double clicks were fired, be sure to print only the first such event.