Jam City

Catalysts Coding Contest
Vienna 2015

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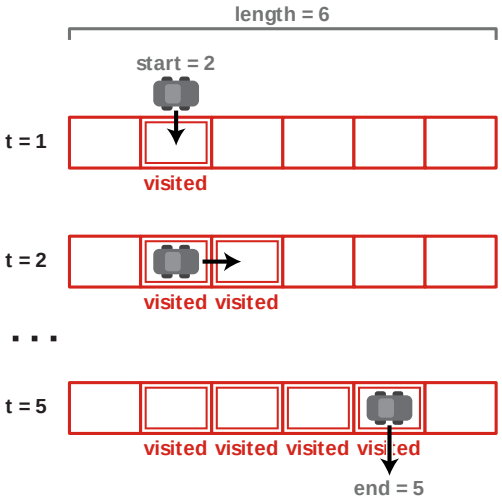
Increasing traffic makes it more and more difficult for car users to reach their target in time. Help them with a connected car app.

Your task in this CCC is to write a program to evaluate the optimal time to leave home to be at the target in time.

General Information

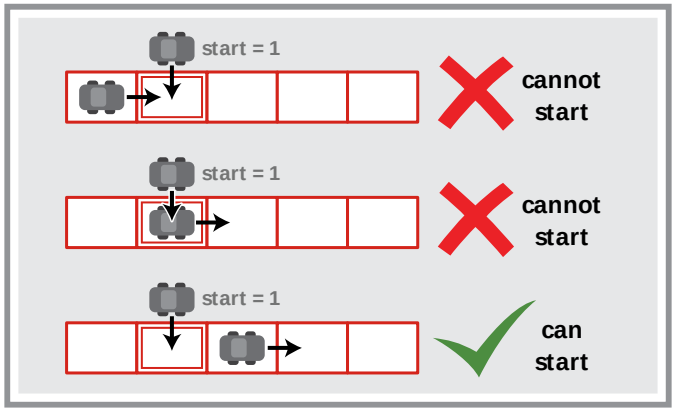
Info

- A road is divided into segments
- to cross a segment needs exactly one second
- the time used for a trip (in seconds) without jam is the number of segments visited



4 visited segments
Time = 4 s

- each time the segment in front of the car is blocked, one second of time elapses without movement
- a car can enter the road (start the trip) only, when the start-segment and the segment before is empty
- a car leaves the road when it reached its target



When will they arrive ?

Level 1

Calculate the cars arrival times of a number of cars on one simple road. All cars start at the same time which is 1. Each car starts on its own segment.

Input:
Note: Lines are separated by newline (\n)

Number road segments (n)
Number of cars (m)
startsegment,endsegment car 1
…
startsegment,endsegment car m

1 < n < 1000
1 < m < 1000
1 < startsegment < endsegment <= n

Result:
Arrival times of the cars, separated by comma, in the order of the input

Example input

```
100
5
3,99
40,75
20,99
28,76
1,100
```

Example output

```
98,37,81,50,101
```