



# Snake Procession

Problem Code: **SNAKPROC**

[Submit \(/SNCKQL17/submit/SNAKPROC\)](/SNCKQL17/submit/SNAKPROC)



[Tweet](#)

Read problems statements in **Russian**

[\(/http://www.codechef.com/download/translated/SNCKQL17/russian/SNAKPROC.pdf\)](http://www.codechef.com/download/translated/SNCKQL17/russian/SNAKPROC.pdf)

and **Vietnamese**

[\(/http://www.codechef.com/download/translated/SNCKQL17/vietnamese/SNAKPROC.pdf\)](http://www.codechef.com/download/translated/SNCKQL17/vietnamese/SNAKPROC.pdf)

as well.

The annual snake festival is upon us, and all the snakes of the kingdom have gathered to participate in the procession. Chef has been tasked with reporting on the procession, and for this he decides to first keep track of all the snakes. When he sees a snake first, it'll be its Head, and hence he will mark a 'H'. The snakes are long, and when he sees the snake finally slither away, he'll mark a 'T' to denote its tail. In the time in between, when the snake is moving past him, or the time between one snake and the next snake, he marks with '.'s.

Because the snakes come in a procession, and one by one, a valid report would be something like "...H..T...HTH....T.", or "...", or "HT", whereas "T...H..H.T", "H..T..H", "H..H..T..T" would be invalid reports (See explanations at the bottom).

Formally, a snake is represented by a 'H' followed by some (possibly zero) '.'s, and then a 'T'. A valid report is one such that it begins with a (possibly zero length) string of '.'s, and then some (possibly zero) snakes between which there can be some '.'s, and then finally ends with some (possibly zero) '.'s.

Chef had binged on the festival food and had been very drowsy. So his report might be invalid. You need to help him find out if his report is valid or not.

## Input

- The first line contains a single integer, **R**, which denotes the number of reports to be checked. The description of each report follows after this.
- The first line of each report contains a single integer, **L**, the length of that report.
- The second line of each report contains a string of length **L**. The string contains only the characters '.', 'H', and 'T'.

## Output

- For each report, output the string "Valid" or "Invalid" in a new line, depending on whether it was a valid report or not.

## Constraints

- $1 \leq R \leq 500$
- $1 \leq \text{length of each report} \leq 500$

## Example

[My Submissions](#)

[\(/SNCKQL17/status/SNAKPROC\)](/SNCKQL17/status/SNAKPROC)

[All Submissions](#)

[\(/SNCKQL17/status/SNAKPROC\)](/SNCKQL17/status/SNAKPROC)

**Successful Submissions**

**+**

**Input:**

```
6
18
..H..T...HTH....T.
3
...
10
H..H..T..T
2
HT
11
.T...H..H.T
7
H..T..H
```

**Output:**

```
Valid
Valid
Invalid
Valid
Invalid
Invalid
```

---

**Explanation**

"H..H..T..T" is invalid because the second snake starts before the first snake ends, which is not allowed.

".T...H..H.T" is invalid because it has a 'T' before a 'H'. A tail can come only after its head.

"H..T..H" is invalid because the last 'H' does not have a corresponding 'T'.

Author: [admin3 \(/users/admin3\)](/users/admin3)

Tester: 5★ [kingofnumbers \(/users/kingofnumbers\)](/users/kingofnumbers)

Date Added: 18-05-2017

Time Limit: 1 secs

Source Limit: 50000 Bytes

Languages: ADA, ASM, BASH, BF, C, C99 strict, CAML, CLOJ, CLPS, CPP 4.3.2, CPP 4.9.2, CPP14, CS2, D, ERL, FORT, FS, GO, HASK, ICK, ICON, JAVA, JS, LISP clisp, LISP sbcl, LUA, NEM, NICE, NODEJS, PAS fpc, PAS gpc, PERL, PERL6, PHP, PIKE, PRLG, PYPY, PYTH, PYTH 3.4, RUBY, SCALA, SCM chicken, SCM guile, SCM qobi, ST, TCL, TEXT, WSPC

---

[Submit \(/SNCKQL17/submit/SNAKPROC\)](/SNCKQL17/submit/SNAKPROC)

**Comments ▶**

---

[CodeChef is a non-commercial competitive programming community](#)

[About CodeChef \(http://www.codechef.com/aboutus/\)](http://www.codechef.com/aboutus/) [About Directi \(http://www.directi.com/\)](http://www.directi.com/) [CEO's Corner \(http://www.codechef.com/ceoscorner/\)](http://www.codechef.com/ceoscorner/)

[C-Programming \(http://www.codechef.com/c-programming\)](http://www.codechef.com/c-programming) [Programming Languages \(http://www.codechef.com/Programming-Languages\)](http://www.codechef.com/Programming-Languages) [Contact Us \(http://www.codechef.com/contactus\)](http://www.codechef.com/contactus)

© 2009 [Directi Group \(http://directi.com\)](http://directi.com). All Rights Reserved. CodeChef uses SPOJ © by [Sphere Research Labs \(http://www.sphere-research.com\)](http://www.sphere-research.com)

In order to report copyright violations of any kind, send in an email to [copyright@codechef.com \(mailto:copyright@codechef.com\)](mailto:copyright@codechef.com)

**Directi** [\(http://directi.com\)](http://directi.com)  
Intelligent People. Uncommon Ideas.

The time now is: 05:11:25 PM

Your IP: 183.82.97.251

CodeChef was created as a platform to help programmers make it big in the world of algorithms, **computer programming** and **programming contests**. At CodeChef we work hard to revive the geek in you by hosting a **programming contest** at the start of the month and another smaller programming challenge in the middle of the month. We also aim to have training sessions and discussions related to **algorithms**, **binary search**, technicalities like **array size** and the likes. Apart from providing a platform for **programming competitions**, CodeChef also has various algorithm tutorials and forum discussions to help those who are new to the world of **computer programming**.

#### **Practice Section (<https://www.codechef.com/problems/easy>) - A Place to hone your 'Computer Programming Skills'**

Try your hand at one of our many practice problems and submit your solution in a language of your choice. Our **programming contest** judge accepts solutions in over 35+ programming languages. Preparing for coding contests were never this much fun! Receive points, and move up through the CodeChef ranks. Use our practice section to better prepare yourself for the multiple **programming challenges** that take place through-out the month on CodeChef.

#### **Compete (<https://www.codechef.com/problems/easy>) - Monthly Programming Contests and Cook-offs**

Here is where you can show off your **computer programming skills**. Take part in our 10 day long monthly coding contest and the shorter format Cook-off **coding contest**. Put yourself up for recognition and win great prizes. Our **programming contests** have prizes worth up to INR 20,000 (for Indian Community), \$700 (for Global Community) and lots more CodeChef goodies up for grabs.

#### **Programming Tools**

[Online IDE \(<https://www.codechef.com/ide>\)](https://www.codechef.com/ide)

[Upcoming Coding Contests \(<http://www.codechef.com/contests#FutureContests>\)](http://www.codechef.com/contests#FutureContests)

[Contest Hosting \(<http://www.codechef.com/hostsyourcontest>\)](http://www.codechef.com/hostsyourcontest)

[Problem Setting \(<http://www.codechef.com/problemsetting>\)](http://www.codechef.com/problemsetting)

[CodeChef Tutorials \(<http://www.codechef.com/wiki/tutorials>\)](http://www.codechef.com/wiki/tutorials)

[CodeChef Wiki \(<https://www.codechef.com/wiki>\)](https://www.codechef.com/wiki)

#### **Practice Problems**

[Easy \(<https://www.codechef.com/problems/easy>\)](https://www.codechef.com/problems/easy)

[Medium \(<https://www.codechef.com/problems/medium>\)](https://www.codechef.com/problems/medium)

[Hard \(<https://www.codechef.com/problems/Hard>\)](https://www.codechef.com/problems/Hard)

[Challenge \(<https://www.codechef.com/problems/challenge>\)](https://www.codechef.com/problems/challenge)

[Peer \(<https://www.codechef.com/problems/extcontest>\)](https://www.codechef.com/problems/extcontest)

[School \(<https://www.codechef.com/problems/school>\)](https://www.codechef.com/problems/school)

[FAQ's \(<https://www.codechef.com/wiki/faq>\)](https://www.codechef.com/wiki/faq)

#### **Initiatives**

[Go for Gold \(<http://www.codechef.com/goforgold>\)](http://www.codechef.com/goforgold)

[CodeChef for Schools \(<http://www.codechef.com/school>\)](http://www.codechef.com/school)

[Campus Chapters \(\[http://www.codechef.com/campus\\\_chapter/about\]\(http://www.codechef.com/campus\_chapter/about\)\)](http://www.codechef.com/campus_chapter/about)

[Domain Registration in India \(<http://www.bigrock.in/>\)](http://www.bigrock.in/) and [Web Hosting \(<http://www.bigrock.com/web-hosting/>\)](http://www.bigrock.com/web-hosting/) powered by BigRock