S4 // CCC - Strategic Initiative

Google Home Mini: “Zhehai! Zhehai! Please wake up Zhehai!”

Zhehai: “... mmmph. Hey, google. What time is it?”

Google Home Mini: “4:07 am, Commander. The following message just arrived on the emergency physics lmao priority classified channel. It states

> *Dear Zhehai, Bad news, buddy. Crazy Enriched Students had a bit too little sleep last night because of Mrs. Mohan’s new competitively marked project. When they woke up this morning, instead of the snooze buttons on their alarm clock, they ... well, let me put it this way: we've got tons of nuclear missiles flying this way. Unfortunately, all that we have is a chart of the altitudes at which the missiles are flying, arranged by the order of arrivals. Go for it, buddy.*
>
> *Good luck. Secretary of Defense Anish Aggarwal, P.S. Daniel Liu and Shrey Mahey say hi.”*

To make things worse, Zhehai remembers that physics lmao has a fatal flaw due to the budget cuts. When it sends out missiles to intercept the targets, every missile has to fly higher than the previous one. In other words, once you hit a target, the next target can only be among the ones that are flying at higher altitudes than the one you just hit. For example, if the missiles are flying toward you at heights of 1, 6, 2, 3, and 5 (arriving in that order), you can try to intercept the first two, but then you won’t be able to get the ones flying at 2, 3, 5 because they are lower than 6. Your job is to hit as many targets as possible. So you have to quickly write a program to find the best sequence of targets that the flawed program is going to destroy. Enriched physics war tactics are fairly strange; their generals are stickers for mathematical precision. Their missiles will always be fired in a sequence such that there will only be one solution to the problem posed above.

Input Explanation

The input begins with a single positive integer on a line by itself indicating the number of the cases following, each of them as described below. This line is followed by a blank line, and there is also a blank line between two consecutive inputs. The input to your program will consist of a sequence of integer altitudes, each on a separate line.

Output Explanation

The input begins with a single positive integer on a line by itself indicating the number of the cases following, each of them as described below. This line is followed by a blank line, and there is also a blank line between two consecutive inputs. The input to your program will consist of a sequence of integer altitudes, each on a separate line.

Sample Input

```
1

1
6
2
3
5
```

Sample Output

```
Max hits: 4
1
2
3
5
```