

Problem I:
Antibiotics

Source file: antibiotics.{c | cpp | java}

Input file: antibiotics.in

Antibiotic misuse, sometimes called antibiotic abuse or antibiotic overuse, refers to the misuse or overuse of antibiotics, with potentially serious effects on health. It is a contributing factor to the development of antibiotic resistance, including the creation of multidrug-resistant bacteria, informally called "super bugs": relatively harmless bacteria can develop resistance to multiple antibiotics and cause life-threatening infections^[1].

The health authority would like to implement a new system where all antibiotics prescriptions are logged to a central database. The main purpose of this is to limit the use of antibiotics in general as well as limit their use per person. Antibiotics are given in courses of a varying number of days each.

In this problem, you are required to write a program to help the health authority figure out if any patient has been prescribed a number of overlapping antibiotic courses, given the database of patients and the start and end day of their antibiotic courses.

Input

The first line of the input file contains an integer N indicating the number of test cases. Each test case represents a database and starts with an integer C ($0 < C \leq 100,000$) describing the number of antibiotic courses in the database. C lines follow containing three integers each P, S, E ($0 < P \leq 1,000$), ($0 < S < E \leq 10^8$) where P is the patient ID number and S , and E are the start day and the end day of the antibiotic course, respectively.

Output

For each test case, your program should print out a line for each patient with overlapping antibiotic courses sorted in an ascending order of the patient IDs. Each line should be in the below format:

P A

where P represents the patient ID and A is the maximum number of overlapping antibiotic courses for this patient. If no patient has overlapping antibiotic courses, print "All Clear" without the quotes instead. Print an empty line after each test case.

Sample Input

```
3
4
1 1 5
1 4 7
1 5 9
2 2 10
4
1 1 2
1 3 4
2 1 2
2 3 4
3
2 1 2
2 2 3
2 10 17
```

Output for Sample Input

```
1 2
All Clear
2 2
```

[1] Wikipedia