**Best Friends**

Ron wants to develop a “best friend” counter feature in a messaging application that he is designing. To become a “best friend”, the number of messages that have been sent between the two friends must be the highest amount. There can also be ties for who is best friend. In these instances, the following rules apply:

* If there is one best friend, you will output “[name of friend] is my best friend!”
* If there are two friends, you will output “[name] and [name] are my best friends!”
* If there are more than two friends, you will output “[names comma separated], and [name] are my best friends!”
  + In the cases of two or more instances, you will output the names in alphabetical order.

**Input:** The first line of input contains **T,** the number of test cases. The first line of each test case contains **F**, the number of friends. The next **F** lines contain two space-separated elements. The first element contains a name of a friend. The next element contains the number of messages that friend has sent them in the previous month.

**Output:** For each test case, you will output “CASE #(case number): “ followed by the answer to the test case.

**Example Input:**

3

6

Will 0

Anne 41

Mom 100

Dad 75

Beth 56

Pat 13

4

Rob 7

John 7

Sophie 7

David 3

5

Richie 0

Charlie 1

Bernard 1

Sasha 0

Jeb 0

**Example Output:**

CASE #1: Mom is my best friend!

CASE #2: John, Rob, and Sophie are my best friends!

CASE #3: Bernard and Charlie are my best friends!