**CS 110 Lab 6: Second Minimum Non-Unique Element**

Given an array *A* of *n* positive elements, display the second minimum **non-unique** element. To accomplish this, determine first which of the elements are unique and which are not, and then group the non-unique elements by their corresponding values (e.g., group all 101’s together, all 102’s together, etc.). Finally, output the second minimum group value. If no such value exists (i.e., there is at most just 1 group of equal non-unique elements), output a -1.

The input file begins with a line containing a single integer *m* > 0, indicating the number of test cases. This is followed by descriptions of the *m* test cases. Each test case begins with a blank line followed by an integer *n* (where 1 < *n* < 100), indicating the size of the array A, and finally *n* lines specifying the actual *n* elements. The *n* elements are all positive integers.

For each input, output the test case number followed by the correct answer.

See the example below. Note: the sample input continues to the second page.

Example:

|  |  |
| --- | --- |
| Input | Output |
| 4  3  101  102  103  6  101  102  103  102  102  102  8  103  102  102  103  101  103  104  105  15  101  101  101  101  102  103  107  104  105  104  106  106  107  108  109 | Test Case #1: -1  Test Case #2: -1  Test Case #3: 103  Test Case #4: 104 |