Project 2: Sort Poems

Time Limit: 1 second

Harry once found an interesting ancient poem written on a long strip of paper. He decided to save this piece of art into his computer by scanning the paper segment by segment. However, over excited as he was, he forgot to name the segment files in the proper order! Harry almost fainted with hundreds of unsorted segment files in hand. Now he comes to you for help. The only clue he has is that there is always a one-line overlap between two consecutive segments. For example, the poem shown in Figure 1 is saved in two files as shown in Figure 2, provided that each file can only contain up to 4 lines. Notice that a blank line is also counted as a line in the second piece of file.

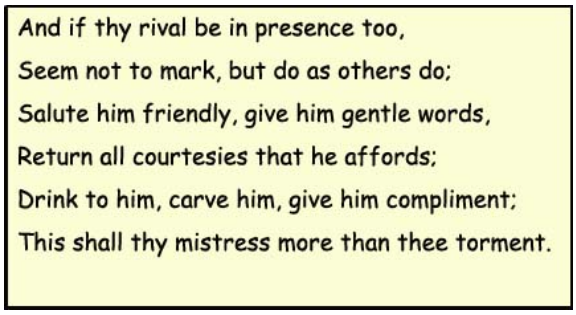

Figure 1

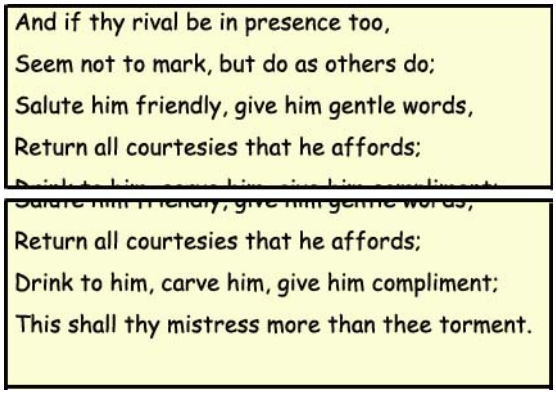

Figure 2

Input Specification:

Your program must read test cases from the standard input.

Input consists of several test cases. For each test case, the first line contains two positive integers *Sn*(≤1000) and *Ln*(≤100), which are the total numbers of segments and lines per segment, respectively. Then *Sn*×*Ln* lines follow, which are the contents of *Sn* segments. Each line contains no more than 80 characters. It is guaranteed that the content of each overlapped line is unique.

The input ends with *Sn* and *Ln* both being 0. That case must NOT be processed.

Output Specification:

For each test case, output to the standard output. First print a line saying "`Scenario #`*k*", where *k* is the number of the test case (starting from 1). Then, for each case, print the complete poem out. There must be one blank line between the outputs of two neighboring cases, but no extra blank line at the end of output.

Sample Input:

```
2 4
Return all courtesies that he affords;
Drink to him, carve him, give him compliment;
This shall thy mistress more than thee torment.

And if thy rival be in presence too,
Seem not to mark, but do as others do;
Salute him friendly, give him gentle words,
Return all courtesies that he affords;
2 3
This is the 3rd line.
This is the 4th line.
This is the 5th line.
This is the 1st line.
This is the 2nd line.
This is the 3rd line.
0 0
```

Sample Output:

```
Scenario #1
And if thy rival be in presence too,
Seem not to mark, but do as others do;
Salute him friendly, give him gentle words,
Return all courtesies that he affords;
Drink to him, carve him, give him compliment;
This shall thy mistress more than thee torment.


Scenario #2
This is the 1st line.
This is the 2nd line.
This is the 3rd line.
This is the 4th line.
This is the 5th line.
```

Grading Policy:

This assignment is due Friday, October 23rd, 2009 at 10:00pm.

- **Programmer:** Write the program **(50 pts.) with sufficient comments**.
- **Tester:** Provide a set of test cases to fill in a test report **(20 pts.)**. Note that the tester is responsible, as well as the programmer is, for any bug later found by Judge. Write analysis and comments **(10 pts.)**.
- **Report Writer:** Write Chapter 1 **(6 pts.)**, Chapter 2 **(12 pts.)**, and finally a complete report **(2 pts. for overall style of documentation)**.