C Coding Questions

Easy

Reverse me!

Write a program to reverse a given integer number. Max length is 10 digits. Min is 4. Built-in functions are not allowed. Arrays are not allowed too.

Sample Input

```
1234567
```

Sample Output

```
7654321
```

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UpUp

You are to ask a string, consisting of several words separated by one or more spaces. In each word which starts from lowercase letter, replace starting letter with uppercase letter.

Sample Input:

```
Wish you were here
```

Sample Output:

```
Wish You Were Here
```

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Average

11	21	9	83	65
42	26	70	25	18
15	15	43	10	36
31	41	23	72	35
63	33	29	28	11

Snail Matrix

Snail Matrix is the ordering of matrix blocks on a spiral display. Given the size of matrix row and column consecutively and separated by space. Given the sample matrix shown above the snail matrix output was 11, 21, 9, 83, 65, 18, 36, 35, 11, 28, 29, 33, 63, 31, 15, 42, 26, 70, 25, 10, 72, 23, 41, 15, 43 as the proper snail order of matrix separated by comma and space.

INPUT FORMAT

The input starts with an integer N, indicates the number of cases and followed by the input matrix size row and column separated by space, and the matrix itself which separated by space.

OUTPUT FORMAT

For every input case, output the proper snail matrix.

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Word Frequency

In this string problem, create a program that calculate the frequency of each word on every string input. For every line string S, where the length of character sequence denotes as L; let's assume that it contains only lowercase characters and; words are separated by one or more whitespace characters, where every length of words on string denotes as WL.

INPUT FORMAT

The input starts with an integer N, indicates the number of cases and followed by the input character sequence S.

OUTPUT FORMAT

For every input case, output the word in uppercase order together its corresponding frequency number in descending frequency order. In case of having the same frequency it must display in ascending order of words.

CONTRAINTS $1 \leq N \leq 20$ $20 \leq L \leq 100$ $3 \leq WL \leq 10$

SAMPLE INPUT

3

imagination is more important than knowledge

the quick brown fox jumps over the lazy dog

program program code code program

SAMPLE OUTPUT

THE 2
BROWN 1
DOG 1
FOX 1
JUMPS 1
LAZY 1
OVER 1
QUICK 1

PROGRAM 3
CODE 2

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Difficult

Adjacent Double Letters

Given a string contains lowercase of characters where the length of specified string denotes as L, and every length of words therein denotes as WL, you are about to create a program which read a list of words from specified input string and determine if words have adjacent double letters. For: „programming‟ the result must “YES” because it has double character „m‟ which is adjacent. For: „future‟ the result must “NO” because „u‟ are not adjacent.

INPUT FORMAT

The input starts with an integer N, indicates the number of cases and followed by input strings.

OUTPUT FORMAT

For every input case, for every word output YES if word does contain adjacent double letters, otherwise NO.

CONTRAINTS

$1 \leq N \leq 20$

$20 \leq L \leq 100$

$8 \leq WL \leq 20$

SAMPLE INPUT

3

machine learning artificial intelligence

dynamic programming structure

data structures and algorithm

SAMPLE OUTPUT

Case #1: NO NO YES

Case #2: YES NO

Case #3: NO NO

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SCORING

Easy – 5

Average – 10

Difficult – 20

Total: 50

Release Time Will be on **Day 2** at **9AM** to **9PM**