Problem G: Guess

Oh no! Midterm exam week is just around the corner! The clock is ticking, and three college students: Krit, Kwan, and Uthai have been so focused on preparing for the ACM-ICPC contest that they barely had time to review their midterm materials. Their only hope now is to rely on their guessing strategies to get through the exam. The exam has ***N*** questions, each with one of three possible answers: A, B, or C.

With only a little time left, they've each come up with their own unique guessing strategies:

- Krit is sticking to his classic pattern: A, B, C, A, B, C, A, B, C, A, B, C...
- Kwan is using a rhythmic approach: B, A, B, C, B, A, B, C, B, A, B, C...
- Uthai has her own creative strategy: C, C, A, A, B, B, C, C, A, A, B, B...

Your mission is to help determine which student's guessing strategy will lead to the most correct answers, given the correct answers to the exam.

Input:

The input consists of multiple lines, each representing the correct answers for an exam in a different test case. Each line is a string of letters 'A', 'B', and 'C' corresponding to the correct answers for each question. The input ends when the end of the file is reached.

Output:

For each test case, first, print the maximum number of correct answers that any one of the three students achieves. Following that, list the names of the students (in alphabetical order) whose guessing strategy results in this maximum number of correct answers.

Sample Input	Sample Output
BAACC AAAABBBBB	3 Kwan 4 Krit Kwan Uthai

Explanation:

Test Case #1:

- The exam has 5 questions, and the answer key is BAACC
- Krit uses his guessing pattern and answers ABCAB, so he receives 0 point
- Kwan uses his guessing approach and answers BABCB, so he receives 3 points
- Uthai uses her guessing strategy and answers CCAAB, so she receives 1 point
- Then, the program should answer the highest score, which is 3 points, followed by the name of the person who receives the highest score: “3 Kwan”

Test Case #2:

- In this case, all three of them receive 4 points, so the program should answer the highest score, followed by their names (order by alphabetical): “4 Krit Kwan Uthai”

Constraints:

- 1 <= Number of test cases <= 1000
- 1 <= ***N*** <= 100