4_字串遊戲 (String Game)

(15 分)

時間限制: 1 second

記憶體限制: 256 MB

題目敘述

呱呱一號與呱呱二號想要來一場經典的字串遊戲，這個遊戲由兩個玩家輪流進行，每一次遊戲都會有一個字串 s，每一個玩家的回合開始時都必須選擇三個正整數 $(i,j,k), 1 \leq i < j < k \leq |s|$ 滿足 $s_i =$"a", $s_j = s_k =$"b"。

如果之前的某一回合已經選過這三個正整數了，那麼接下來的回合就不能再選擇這三個正整數，舉個例子來說如果某一回合選擇了 $(1,2,4)$，那麼接下來就不能再選擇 $(1,2,4)$，但可以選擇 $(1,2,5)$。

遊戲的結束條件為，如果某一回合該玩家無法選出三個滿足條件的正整數，則該玩家輸了這一場遊戲。

已知呱呱一號跟呱呱二號都會使用最佳策略來玩這場遊戲，請你設計一個程式，給定一個字串 s，並輸出如果呱呱一號是先手玩家，那麼誰會贏下這一場遊戲。

輸入格式

輸入一個字串 s，意義如同題目敘述所述。

輸出格式

如果呱呱一號會贏下這一場遊戲則輸出 "DuckDuck 1"，反之則輸出 "DuckDuck 2"（不含引號）。

資料範圍

- $|s| \leq 100$。
- s 中只會有小寫字母。

測試範例

輸入範例 1

```
ytp
```

輸出範例 1

```
DuckDuck 2
```

輸入範例 2

```
abb
```

輸出範例 2

```
DuckDuck 1
```

輸入範例 3

```
cabbabbc
```

輸出範例 3

```
DuckDuck 1
```

範例說明

在範例三中，可以選擇的 i, j, k 有：

- $(2, 3, 4)$
- $(2, 3, 7)$
- $(2, 3, 8)$
- $(2, 4, 7)$
- $(2, 4, 8)$
- $(2, 7, 8)$
- $(5, 7, 8)$

共 7 組，因此呱呱一號獲得勝利。

4_String Game

(15 points)

Time Limit: 1 second

Memory Limit: 256 MB

Statement

DuckDuck No.1 and DuckDuck No.2 want to play a classic string game. The game is turn-based, and each game starts with a string s. At the beginning of each player's turn, they must choose three positive integers (i, j, k), where $1 \leq i < j < k \leq |s|$, and these integers must satisfy s_i ="a", s_j ="b", s_k ="b".

If a set of these three integers has already been chosen in a previous turn, it cannot be selected again. For example, if $(1, 2, 4)$ was chosen in one turn, it cannot be chosen again, but $(1, 2, 5)$ could be.

The game ends when a player cannot select three integers that meet the criteria, and that player loses the game.

Given that both DuckDuck No.1 and DuckDuck No.2 will play optimally, design a program that, given a string s, outputs who would win the game if DuckDuck No.1 starts first.

Input Format

The first line contains a string s, which is as described above.

Output Format

Output "DuckDuck 1" if DuckDuck No.1 would win the game, otherwise output "DuckDuck 2" (without quotes).

Constraints

- $|s| <= 100$.
- s only contains lowercase alphabets.

Test Cases

Input1

```
ytp
```

Output 1

```
DuckDuck 2
```

Input 2

```
abb
```

Output 2

```
DuckDuck 1
```

Input 3

```
cabbabbc
```

Output 3

```
DuckDuck 1
```

Illustrations

In example 3, we can choose following (i, j, k):

- $(2, 3, 4)$
- $(2, 3, 7)$
- $(2, 3, 8)$
- $(2, 4, 7)$
- $(2, 4, 8)$
- $(2, 7, 8)$
- $(5, 7, 8)$

There are 7 choices in total, hence DuckDuck No.1 will win the game.