Lab: Strings and Text Processing

Test your tasks in the Judge system: https://judge.softuni.org/Contests/4462

1. Reverse Strings

Write a program that:

- Reads a **series of strings** from the console, until you receive an **"end"** command
- **Reverse** given strings
- Print each **pair (old text and reversed text)** on a separate line in the format:

  ```
  "{word} = {reversed word}"
  ```

Examples

Input	Output
helLo Softuni bottle end	helLo = oLleh Softuni = inutfoS bottle = elttob
Dog caT chAir end	Dog = goD caT = Tac chAir = riAhc

2. Repeat Strings

Write a program that:

- Reads an **array of strings** from the console

- Each string is repeated **N times**, where **N is the length of the string**

- Print the **concatenated string**

Examples

Input	Output
hi abc add	hihiabcabcabcaddaddadd
work	workworkworkwork
ball	ballballballball

3. Substring

Write a program that:

- Read **first string** from the first line of the console
- Reads **second string** from the second line of the console
- **Remove all** of the **occurrences** of the **first string in the second string**

- **Print** the **remaining string**

Examples

Input	Output	Comment
ice kicegiciceeb	kgb	We remove "**ice**" once and we get "**kgiciceeb**" We match "**ice**" one more time and we get "kgiceb" There is one more match. The finam result is "kgb"
hep ShepoftunihepIsGrhepeat	SoftuniIsGreat	

4. Text Filter

Create a program that takes a **text** and a **string of banned words**. All words included in the ban list should be replaced with a string of **asterisks '*'**, whose length must be equal to the word's length. The entries in the ban list will be separated by a **comma** and **space ", "**. The ban list should be entered on the first input line and the text on the second input line.

Examples

Input	Output
Linux, Windows It is not **Linux**, it is GNU/**Linux**. **Linux** is merely the kernel, while GNU adds the functionality. Therefore we owe it to them by calling the OS GNU/**Linux**! Sincerely, a **Windows** client	It is not *****, it is GNU/*****. ***** is merely the kernel, while GNU adds the functionality. Therefore we owe it to them by calling the OS GNU/*****! Sincerely, a ******* client
von Richthofen, German, 80 air Manfred Albrecht Freiherr **von Richthofen**, known in English as Baron **von Richthofen** was a fighter pilot with the **German** Air Force during World War I. He is considered the ace-of-aces of the war, being officially credited with **80 air** combat victories.	Manfred Albrecht Freiherr **************, known in English as Baron ************** was a fighter pilot with the ****** Air Force during World War I. He is considered the ace-of-aces of the war, being officially credited with ****** combat victories.

5. Digits, Letters and Others

Write a program that:
- Read a **single string** from the console
- Print **all the digits** on the first line
- Print **all the letters** on the second line
- Print **all the other characters** on the third line

Note: There will always be at least one digit, one letter and one other character.

Examples

Input	Output

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