Lab: String and Text Processing

Problems for lab for the "PHP Fundamentals" course @ SoftUni.

You can check your solutions in Judge.

1. Substring

On the first line you will receive a string. On the second line you will receive a second string. Write a program that removes all of the occurrences of the first string in the second until there is no match. At the end 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 final result is "kgb"

Hints

- Read the input.
- Remove the matches.
  - Use the function **`str_replace(searchText, '', string)`**

2. Reverse Strings

You will be given series of strings until you receive an **"end"** command. Write a program that reverses strings and print word and reversed word on separate line in 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

Solution

Use while loop and read strings until you receive "**end**".

```php
<?php
$input = readline();
while($input != "end"){
    $input = readline();
}
```

Reverse the string with **strrev()** function.

```php
$reversed = strrev($input);
```

Print the reversed string in the specified format.

```php
echo $input . " = " . $reversed . PHP_EOL;
```

3. Repeat strings

Write a program that reads an array of strings. 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

Solution

- Read a string array.

```php
$words = explode( delimiter: " ", readline());
```

- Iterate through elements in the array.

```php
foreach ($words as &$word) {

}
```

- Find the length of the current word.

```php
foreach ($words as &$word) {
    $count = strlen($word);
    echo str_repeat($word, $count);
}
```

4. Text Filter

Write a program that takes a **text** and a **string of banned words**. All words included in the ban list should be replaced with **asterisks** "*****", 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

Hints

- Read the input.
- Replace all ban words in the text with asterisk (*).
  - Use the function **`str_replace()`.**
  - Use **`str_repeat()`** to create the replacement

5. Count string occurrences

Write a program that receives a text and a string to search for. Use **spaces**, **commas**, **dots**, **question marks** and **exclamation marks** as word **delimiters**. Print all the occurrences of that word in the string

Examples

Input	Output
This is a word and it also is a sentence. is	2
How are you?? Good, thanks. are	1

Hint

Split the sentence into words and create a counter that stores how many times the searched word occurs

6. Palindromes

Write a program that extracts from a given text all palindromes, e.g. **ABBA**, **lamal**, **exe** and prints them on the console on a single line, separated by comma and space. Use **spaces**, **commas**, **dots**, **question marks** and **exclamation marks** as word **delimiters**. Print only **unique** palindromes, **sorted** [natural order](#).

Examples

Input	Output
Hi,exe? ABBA! Hog fully a string. Bob	a, ABBA, exe

Hints

To sorting result use **`natcasesort()`** function