

Lab: Strings and Text Processing

This document defines the homework assignments from the ["Programming Fundamentals" Course @ Software University](#). Please submit your solutions (source code) of all below described problems in [Judge](#).

1. Reverse String

Write a program that reads a string from the console, reverses it and prints the result back at the console.

Examples

| Input | Output |
|-----------|-----------|
| sample | elpmas |
| 24tvcoi92 | 29iocvt42 |

2. Count Substring Occurrences

Write a program to **find how many times a given string appears in a given text as substring**. The text is given at the first input line. The search string is given at the second input line. The output is an integer number. Please ignore the **character casing**. **Overlapping** between occurrences is **allowed**.

Examples

| Input | Output |
|---|--------|
| Welcome to the Software University (SoftUni)! Welcome to programming. Programming is wellness for developers, said Maxwell. wel | 4 |
| aaaaaa aa | 5 |
| ababa caba aba | 3 |
| Welcome to SoftUni Java | 0 |

3. 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 | 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/Linux! Sincerely, a
Windows client

by calling the OS GNU/*****! Sincerely, a
***** client

4. 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** lexicographically.

Examples

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