

1. Customer Name Formatting

A customer enters their full name in messy format (extra spaces, mixed case). You must clean it before storing.

Question

Write a Python program that takes a user-entered name like

" aSha RAjEsH "

and converts it into:

"Asha Rajesh"

2. Scenario: Product Code Validation

E-commerce system stores product codes like "PROD-9832". You must verify format.

Question

Check whether a given string:

starts with "PROD-"

followed by exactly 4 digits and length of the String should be as 9

Example valid codes: "PROD-1234", "PROD-0099".

3. Scenario: Message Filtering (Chat App)

You are building a chat app; certain offensive words must be replaced.

Question

Replace all occurrences of "bad" and "ugly" in a message with "****".

Example:

Input → "That was a bad idea and ugly behaviour"

Output → "That was a *** idea and *** behaviour"

4. Scenario: Detect Plagiarism in Students' Answers

Compare two answer strings and check if both contain similar key phrases.

Question

Given two strings:

"Python is a popular programming language"

"Python programming language is very popular"

Check if both include the words "python", "popular", and "language".

5. Scenario: Reverse Words in a Sentence (Not the Letters)

In a text editor, you want to implement a "reverse sentence" feature.

Question

Input: "Python is fun"

Output: "fun is Python"

6. Scenario: Simple Password Strength Checker

You must check if a user's password meets requirements.

Question

Check if a password:

- has at least 8 characters
- contains at least 1 uppercase letter
- contains at least 1 digit

7. Email Username Extractor

A student types full email; you want only the username part.

Question

Input: "john.doe123@gmail.com"

Output: "john.doe123"

8. Detect Palindrome Words

Library system checks palindromic book codes.

Question

Check if the input string "Malayalam" is a palindrome (case-insensitive).

9. Anagram Checker for Username Validation

Problem Scenario

Your college is building a **student portal**.

To avoid confusion, students **cannot create usernames that are anagrams of existing usernames**.

For example:

- Existing username: "listen"
- New username entered: "silent" → ❌ Not allowed (they are anagrams)
- New username entered: "silver" → ✅ Allowed