# Problem 1 – Galactic Code Decryption



*Welcome codebreaker. You have been recruited by the Galactic Federation to assist in deciphering transmissions intercepted from a mysterios alien civilization. These coded messages are crucial for understanding their technology and intentions. Your mission is to modify these transmissions using a set of decryption commands until the command "Finalize" is given.*

You are provided with a **coded message** in the form of a **string**. Until receiving the command "**Finalize**" you must process this string using **various commands** to manipulate and decode the message. Each command will alter the message in a specified manner**:**

* **"Encrypt"**
  + **Reverse** the order of the characters in the message.
  + **Print** the message.
* **"Decrypt"**
  + **Swap** the case of all characters in the message (uppercase to lowercase, lowercase to uppercase).
  + **Print** the message.
* **"Substitute {old\_char} {new\_char}"**
  + **Replace** alloccurrencesof the specified character **{old\_char} (case-sensitive!)** with the character **{new\_char}.**
  + **Print** the message.
  + If **{old\_char}** is not found, print: **"Character not found.".**
* **"Scramble {index} {char}"**
  + **Replace** the **character** at the specified index with **{char}.**
  + **Print** the message.
  + If the index is out of range, print: **"Index out of bounds."**.
* **"Remove {substring}"**
  + **Delete** all instances of the specified substring from the message **(case-sensitive!)** .
  + **Print** the message.

If a command that does not match any of the above is received, print **"Invalid command detected!"**.

## Input / Constraints

* The first line will contain the initial coded message as a string.
* Subsequent line will contain commands until the **"Finalize"** command is encountered.
* All commands are **case-sensitive**.

## Output

* **Print** the **output** of the **commands** in the **format described above**.

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| helloWorld  Encrypt  Decrypt  Substitute L z  Remove O  Scramble 0 H  Invalid command detected!  Finalize | dlroWolleh  DLROwOLLEH  DzROwOzzEH  DzRwzzEH  HzRwzzEH  Invalid command detected! |
| GalacticMission  Decrypt  Scramble 5 Z  Remove S  Substitute G X  Encrypt  Finalize | gALACTICmISSION  gALACZICmISSION  gALACZICmIION  Character not found.  NOIImCIZCALAg |
| Federation1  Encrypt  Decrypt  Remove 1  Substitute E e  Scramble 2 X  Encrypt  Finalize | 1noitaredeF  1NOITAREDEf  NOITAREDEf  NOITAReDef  NOXTAReDef  feDeRATXON |

## JS Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| (["helloWorld",  "Encrypt",  "Decrypt",  "Substitute L z",  "Remove O",  "Scramble 0 H",  "Invalid command detected!",  "Finalize"]) | dlroWolleh  DLROwOLLEH  DzROwOzzEH  DzRwzzEH  HzRwzzEH  Invalid command detected! |
| (["GalacticMission",  "Decrypt",  "Scramble 5 Z",  "Remove S",  "Substitute G X",  "Encrypt",  "Finalize"]) | gALACTICmISSION  gALACZICmISSION  gALACZICmIION  Character not found.  NOIImCIZCALAg |
| (["Federation1",  "Encrypt",  "Decrypt",  "Remove 1",  "Substitute E e",  "Scramble 2 X",  "Encrypt",  "Finalize"]) | 1noitaredeF  1NOITAREDEf  NOITAREDEf  NOITAReDef  NOXTAReDef  feDeRATXON |