## Nikulden’s Charity

*After his name day party, Nikolcho wants to find out how much money he has raised for charity. He received an encrypted message with the amount collected. Your task is to help Nikolcho to figure out how much money he has collected.*

First, you are going to **receive** **a string**, then commands.

You will receive "decrypting" **commands** until you get the "**Finish**" command.

* **"Replace {currentChar} {newChar}"**
  + **Replace** all occurrences of **{currentChar}** with **{newChar},** then **print** the **current message**.
* "**Cut {startIndex} {endIndex}"**
  + **Remove** the substring from the **{startIndex}** until the **{endIndex}**, then **print** the **current message**.
  + If any of the indexes is not valid, **print:**

**"Invalid indexes!"**

* "**Make {Upper/Lower}"**
  + **Replace** all letters with **upper/lowe**r case and **print** the **current message**
* **"Check" {string}**
  + **Check**  if the message contains the given string.
    - If it does, **print:** **"Message contains {string}"**
    - If it doesn’t, **print: "Message doesn't contain {string}"**
* "**Sum {startIndex} {endIndex}"**
  + Get the **substring** from **{startIndex}** to **{endIndex}** and **print** the **sum of the ASCII values of the substring.**
  + If any of the **{startIndex}** or **{endIndex}** are invalid, **print:**

**"Invalid indexes!"**

**Note: At any time, the message will contain at least one character.**

## Input

* On the **1st line** you are going to receive the **string**.
* On the next **lines**, until the **"Finish"** command is received, you will be receiving commands.

## Output

* **Print** the **output** of every **command** in the **format** **described** **above**.

## Constraints

* The **indexes** will be integers in the range [**-50**…**50**]

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| ILikeSharan  Replace a e  Make Upper  Check SHEREN  Sum 1 4  Cut 1 4  Finish | ILikeSheren  ILIKESHEREN  Message contains SHEREN  293  ISHEREN |
| **Input** | **Output** |
| HappyNameDay  Replace p r  Make Lower  Cut 2 23  Sum -2 2  Finish | HarryNameDay  harrynameday  Invalid indexes!  Invalid indexes! |