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IT36A

CAESAR CIPHER USING PYTHON

INTRODUCTION:

The Caesar cipher is a basic encryption method where each letter in a message is shifted by a fixed number of positions in the alphabet. For instance, with a shift of 3, "A" becomes "D," "B" becomes "E," and so on. Encryption involves shifting letters forward, while decryption reverses the process by shifting them backward. For example, "HELLO" encrypted with a shift of 3 becomes "KHOOR," and decrypting "KHOOR" with the same shift reveals the original message, "HELLO." The cipher's simplicity makes it easy to understand but also relatively easy to crack without the key. *FOR THIS EXAMPLE, I WILL SHOW I USED THE WORDS, KENNETH LICUANAN, IT36A, BSIT, AIM TO EXCEL.*

LICUANAN_KENNETH_CEASAR.py - C:/Users/me/Desktop/LICUANAN_KENNETH_CEASAR.py...

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```
if char.isalpha():
    shifted = ord(char) + shift
    if char.islower():
        if shifted > ord('z'):
            shifted -= 26
    elif char.isupper():
        if shifted > ord('Z'):
            shifted -= 26
    encrypted_text += chr(shifted)
else:
    encrypted_text += char
return encrypted_text

def caesar_cipher_decrypt(encrypted_text, shift):
    decrypted_text = ""
    for char in encrypted_text:
        if char.isalpha():
            shifted = ord(char) - shift
            if char.islower():
                if shifted < ord('a'):
                    shifted += 26
            elif char.isupper():
                if shifted < ord('A'):
                    shifted += 26
            decrypted_text += chr(shifted)
        else:
            decrypted_text += char
    return decrypted_text

texts = ["KENNETH LICUANAN", "IT36A", "BSIT", "Aim To Excel"]
shifts = [3, 3, 3, 3]

for text, shift in zip(texts, shifts):
    encrypted_text = caesar_cipher_encrypt(text, shift)
    print("Original text:", text)
    print("Encrypted text:", encrypted_text)

    decrypted_text = caesar_cipher_decrypt(encrypted_text, shift)
    print("Decrypted text:", decrypted_text)
    print()
```

Ln: 44 Col: 0

IDLE Shell 3.11.5

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```
Python 3.11.5 (tags/v3.11.5:0ce6ba9, Aug 24 2023, 14:38:34) [MSC v.1936 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.

>>>
= RESTART: C:/Users/me/Desktop/LICUANAN_KENNETH_CEASAR.py
Original text: KENNETH LICUANAN
Encrypted text: NHQHONK OLFXDQDQ
Decrypted text: KENNETH LICUANAN

Original text: IT36A
Encrypted text: LW36D
Decrypted text: IT36A

Original text: BSIT
Encrypted text: EVLW
Decrypted text: BSIT

Original text: Aim To Excel
Encrypted text: Dlp Wr Hafho
Decrypted text: Aim To Excel

>>>
===== RESTART: C:/Users/me/Desktop/LICUANAN_KENNETH_CEASAR.py =====
Original text: KENNETH LICUANAN
Encrypted text: NHQHONK OLFXDQDQ
Decrypted text: KENNETH LICUANAN

Original text: IT36A
Encrypted text: LW36D
Decrypted text: IT36A

Original text: BSIT
Encrypted text: EVLW
Decrypted text: BSIT

Original text: Aim To Excel
Encrypted text: Dlp Wr Hafho
Decrypted text: Aim To Excel

>>>
```

Ln: 39 Col: 0

Type here to search

27°C Mostly clear

ENG 8:53 PM
INTL 4/11/2024