VishwaCTF

CHALLENGE NAME : CHEF'S ENCODING MESSAGE

DEV : ANKUSH KAUDI

CATEGORY : CRYPTOGRAPHY

LEVEL : EASY

2024

DESCRIPTION : My **CHEF** friend who loves to **CODE**, once tried to explore cryptography. After exploring he developed his own encoding and was happy to try something new. He wants you to find out what he has encoded to test the algorithm. Help him with it....

Encoded text : sxu3o_e05v3_xmbigk01_m4ztoi0g1ns!5

FLAG FORMAT : VishwaCTF{drop_your_flag_here}

SOLUTION : From the description we can see two words are highlighted, **CHEF and CODE**. This can be correlated with CODECHEF, a competitive programming site and from the name of the challenge we can check that CODECHEF has a problem statement named “Encoding Message”.

The encoding algorithm is as follows :

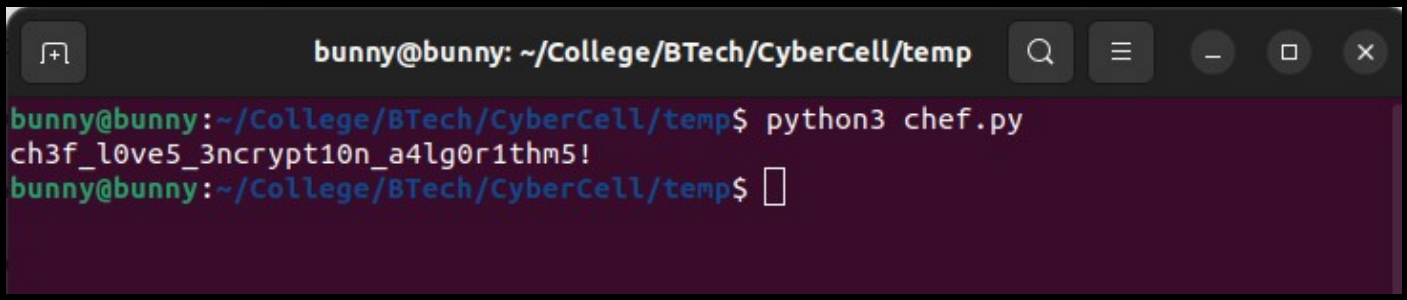
1. Swap the first and second character of the string SS, then swap the 3rd and 4th character, then the 5th and 6th character and so on. If the length of SS is odd, the last character should not be swapped with any other.

2. Replace each occurrence of the letter 'a' in the message obtained after the first step by the letter 'z', each occurrence of 'b' by 'y', each occurrence of 'c' by 'x', etc, and each occurrence of 'z' in the message obtained after the first step by 'a'.

We can write a script to reverse this algorithm which is as follows :

```python
flag = "sxu3o_e05v3_xmbigk01_m4ztoi0g1ns!5"
list1 = list(flag)


for i in range(0, len(list1), 2):
    list1[i], list1[i+1] = list1[i+1], list1[i]

input_str = ''.join(list1)

result = ""
for char in input_str:
    if char.isalpha():
        result += chr(ord('a') + (ord('z') - ord(char)))
    else:
        result += char

print(result)

```

Running this script will give the flag



Flag : VishwaCTF{ch3f_l0ve5_3ncrypt10n_a4lg0r1thm5!}