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fixme2.py

Easy

General Skills

Beginner picoMini 2022

Python

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Description

Fix the syntax error in the Python script to print the flag.

[Download Python script](#)

Hints ?

1

2

3

4

Are equality and assignment the same symbol?

Solution

The first step was downloading the python script using the **wget** tool into my computer.

```
kali@kali: ~/Desktop
File Actions Edit View Help

(kali@kali)-[~/Desktop]
$ wget https://artifacts.picoctf.net/c/6/fixme2.py
--2025-02-04 22:37:48-- https://artifacts.picoctf.net/c/6/fixme2.py
Resolving artifacts.picoctf.net (artifacts.picoctf.net) ... 52.84.102.85, 2600:9000:2054:4e00:16:5ec5:2840:93a1
Connecting to artifacts.picoctf.net (artifacts.picoctf.net)|52.84.102.85|:443 ... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1029 (1.0K) [application/octet-stream]
Saving to: 'fixme2.py'

fixme2.py                               100%[=====] 1.00K --.-KB/s in 0s

2025-02-04 22:37:50 (33.9 MB/s) - 'fixme2.py' saved [1029/1029]

(kali@kali)-[~/Desktop]
$ ls
fixme2.py

(kali@kali)-[~/Desktop]
$
```

I then opened the script on **nano** editor for further analysis.

```
kali@kali: ~/Desktop
File Actions Edit View Help
GNU nano 8.1 fixme2.py

import random

def str_xor(secret, key):
    extend key to secret.length
    new_key = key
    i = 0
    while len(new_key) < len(secret):
        new_key = new_key + key[i]
        i = (i + 1) % len(key)
    return ''.join([chr(ord(secret_c) ^ ord(new_key_c)) for (secret_c, new_key_c) in zip(secret, new_key)])

flag_enc = chr(0x15) + chr(0x07) + chr(0x08) + chr(0x06) + chr(0x27) + chr(0x21) + chr(0x23) + chr(0x15) + chr(0x58) + chr(0x18) + chr(0x11) + chr(0x41) + chr(0x09)

flag = str_xor(flag_enc, 'enkidu')

# Check that flag is not empty
if flag == "":
    print('String XOR encountered a problem, quitting.')
else:
    print('That is correct! Here\'s your flag: ' + flag)
```

To locate the error easily, I ran the program where i got a hint that the issue was about '==' operator which was missing.

```
kali@kali: ~/Desktop
File Actions Edit View Help

(kali@kali)~/Desktop
$ python fixme2.py
File "/home/kali/Desktop/fixme2.py", line 22
    if flag == "":
        ^^^^^^^
SyntaxError: invalid syntax. Maybe you meant '=' or '!=' instead of '=='

(kali@kali)~/Desktop
$
```

They used '=' which is an **assignment** operator in python instead of '==' which compares equality between two values. I replaced = with ==

```
# Check that flag is not empty
if flag == "":
```

then ran the program and the flag was printed out as
picoCTF{3qu4l1ty_n0t_4551gnm3nt_f6a5aefc}.

