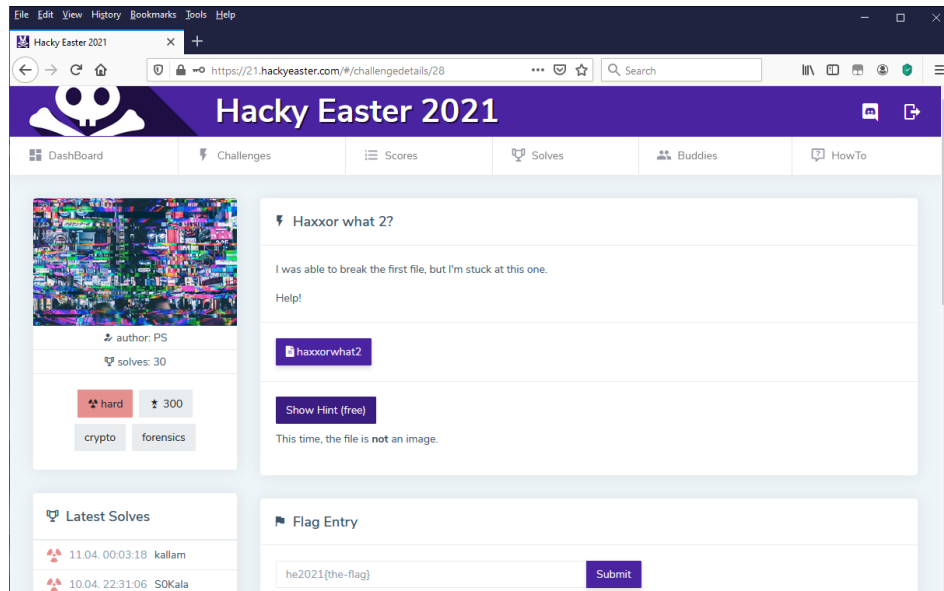# Hacky Easter 2021

Haxxor what 2?

1. Click the **Haxxor what 2?** image:

2. Click the **haxxorwhat2** button and then click the **OK** button, to download the haxxorwhat2 file.

3. Open a Windows Command Prompt.

4. Create a Python script, findxor.py, to XOR the contents of the haxxorwhat2 file, with the string **xor** and then display the first **10** bytes:

```
#!/usr/bin/python

import binascii

f1 = open('haxxorwhat2', 'br')
data = f1.read()
f1.close()

result = bytearray(len(data))
pwd = 'xor'

for i in range(len(data)):
    result[i] = data[i] ^ ord(pwd[i % len(pwd)])

print('%s' % binascii.hexlify(data[0:10]).decode())
print('%s' % binascii.hexlify(result[0:10]).decode())
```

Hacky Easter 2021

5. Execute the following command, from the Windows Command Prompt, to execute the
   findxor.py Python script:

   python findxor.py

   ```
   282471687574616e706f
   504b03101a0619010217
   ```

   the haxxorwhat2 file is possibly a zip file and **xor** is part of the passphrase used to decode
   the contents of the file.

6. Execute the following command, from the Windows Command Prompt, to XOR
   0x282471687574616e with **0x504B030414000000** (normal start of a zip file):

   **python -c "import binascii; print(binascii.unhexlify(hex(0x282471687574616e ^
   0x504B030414000000)[2:]))"**

   ```
   b'xorlatan'
   ```

7. Modify the following lines in the Python script, findxor.py:

Line	Code
10	**pwd = 'xorlatan'**
15	**f2 = open('haxxorwhat2-xorlatan.zip', 'bw')**
16	**f2.write(result)**
17	**f2.close()**

8. Save the modified file.

9. Execute the following command, from the Windows Command Prompt, to execute the
   findxor.py Python script:

   python findxor.py

10. Execute the following command, from the Windows Command Prompt, to check the file
    type of the haxxorwhat2-xorlatan.zip file:

    file haxxorwhat2-xorlatan.zip

    ```
    haxxorwhat2-xorlatan.zip; Zip archive data, at least v2.0 to extract
    ```

Hacky Easter 2021

11. Execute the following command, from the Windows Command Prompt, to list the contents of the haxxorwhat2-xorlatan.zip file:

7z l haxxorwhat2-xorlatan.zip

```
7-Zip 18.05 (x64) : Copyright (c) 1999-2018 Igor Pavlov : 2018-04-30

Scanning the drive for archives:
1 file, 19143 bytes (19 KiB)

Listing archive: haxxorwhat2-xorlatan.zip

--
Path = haxxorwhat2-xorlatan.zip
Type = zip
Physical Size = 19143

   Date      Time    Attr         Size   Compressed  Name
------------------ ----- ------------ ------------  ------------------------
2020-06-17 18:00:41 .....        20506        18979  egg.png
------------------ ----- ------------ ------------  ------------------------
2020-06-17 18:00:41              20506        18979  1 files
```

12. Execute the following command, from the Windows Command Prompt, to expand the haxxorwhat2-xorlatan.zip file:

7z x haxxorwhat2-xorlatan.zip

```
7-Zip 18.05 (x64) : Copyright (c) 1999-2018 Igor Pavlov : 2018-04-30

Scanning the drive for archives:
1 file, 19143 bytes (19 KiB)

Extracting archive: haxxorwhat2-xorlatan.zip
--
Path = haxxorwhat2-xorlatan.zip
Type = zip
Physical Size = 19143

Everything is Ok

Size:      20506
Compressed: 19143
```
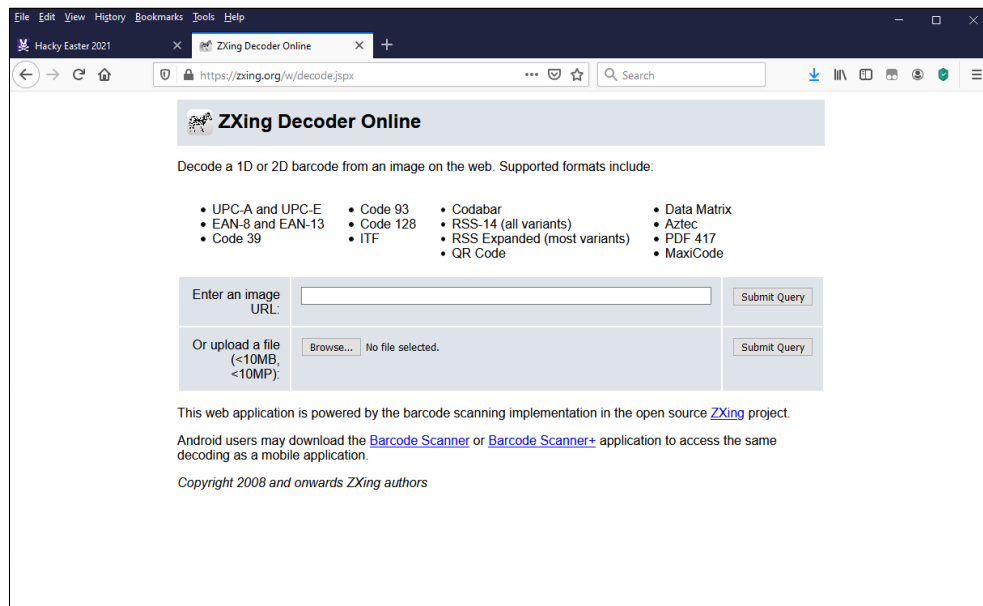
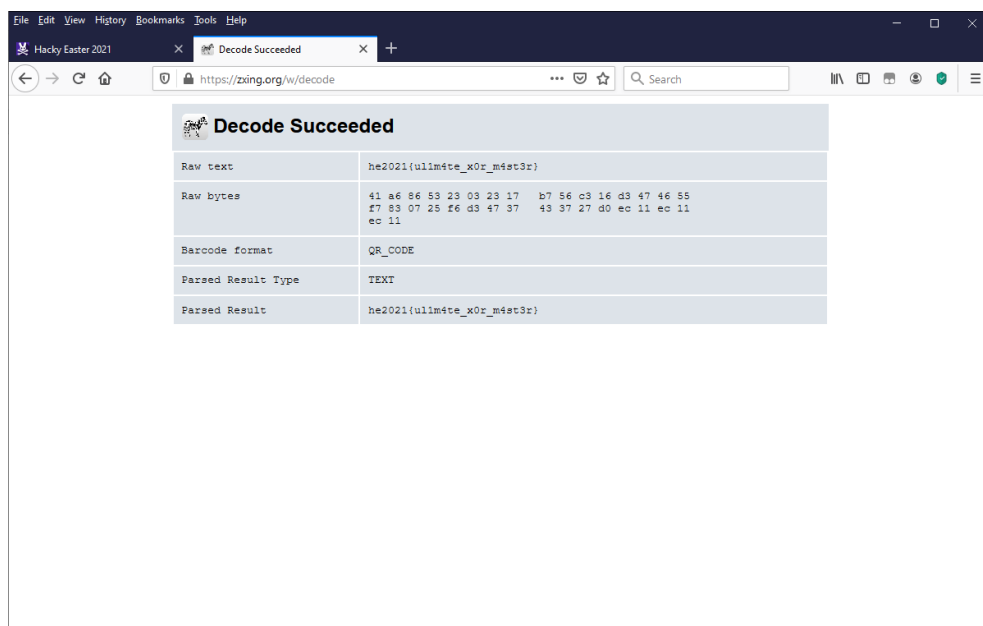13. Close the Windows Command Prompt.

14. Click the **Second** tab.

Hacky Easter 2021

15.   Navigate to **https://zxing.org**:

16.   Click the **Browse...** button and then open the egg.png file.

17.   Click the **Submit Query** button:

18.   Close the **Second** tab.

Flag: **he2021{ul1m4te_x0r_m4st3r}**