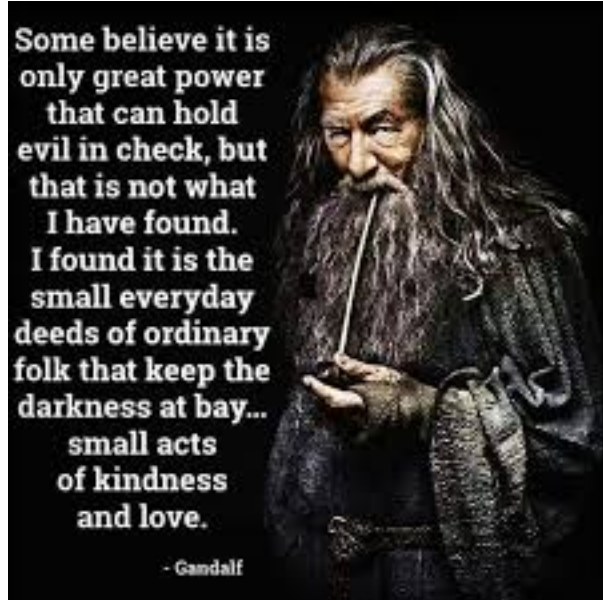# *GandalfTheWise*

GandalfTheWise

Extract the flag from the Gandalf.jpg file. You may need to write a quick script to solve this.
Gandalf.jpg

Flag: CTFlearn{Gandalf.BilboBaggins}

Writeup:
tried strings, got 3 strings:
so i converted text to bytes
taj702@kali:~/Downloads$ strings -n 10 Gandalf.jpg
+Q1RGbGVhcm57eG9yX2lzX3lvdXJfZnJpZW5kfQo=   ==   CTFlearn{xor_is_your_friend} ## HINT
+xD6kfO2UrE5SnLQ6WgESK4kvD/Y/rDJPXNU45k/p
+h2riEIj13iAp29VUPmB+TadtZppdw3AuO7JRiDyU

c4 3e a4 7c ed 94 ac 4e 52 9c b4 3a 5a 01 12 2b 89 2f 0f f6 3f ac 32 4f 5c d5 38 e6 4f e9

87 6a e2 10 88 f5 de 20 29 db d5 54 3e 60 7e 4d a7 6d 66 9a 5d c3 70 2e 3b b2 51 88 3c 94

then I XORed the byte strings

I. Input: hexadecimal (base 16)

```
c43ea47ced94ac4e529cb43a5a01122b892f
0ff63fac324f5cd538e64fe9
```

II. Input: hexadecimal (base 16)

```
876ae21088f5de2029dbd5543e607e4da76d
669a5dc3702e3bb251883c94
```

Calculate XOR

III. Output: hexadecimal (base 16)

```
4354466c6561726e7b47616e64616c662e426
96c626f42616767696e737d
```

Warning:
Hexadecimal variable was not valid base 16. Updated input value may
differ from what you provided.

4354466c6561726e7b47616e64616c662e42696c626f42616767696e737d

Then change bytes back into text to get flag

CTFlearn{Gandalf.BilboBaggins}