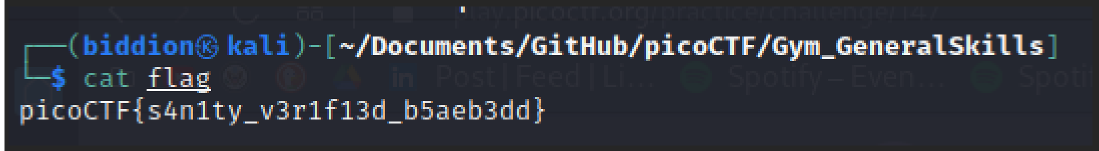
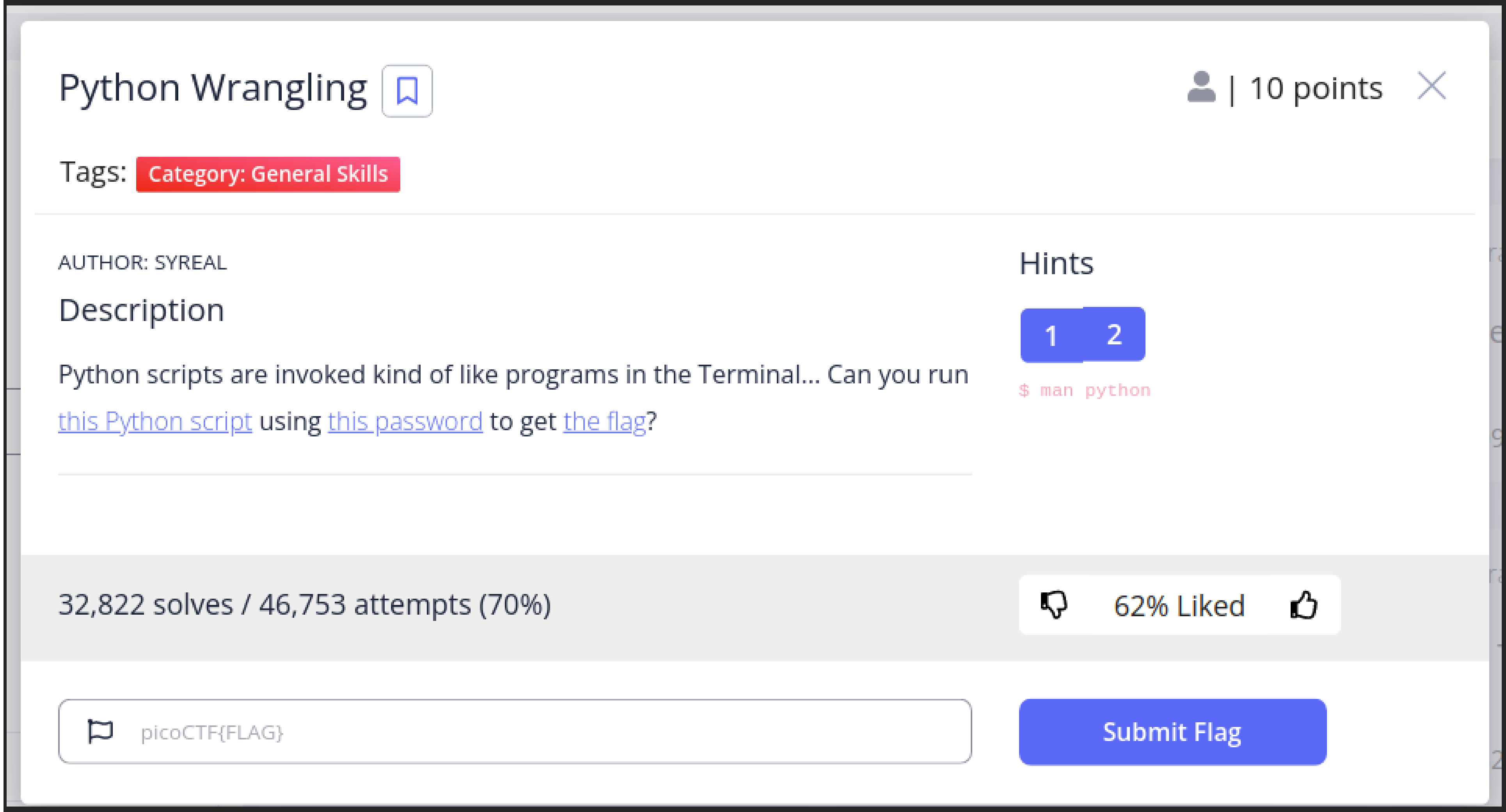
picoGYM General Skills



```
┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ cat flag
picoCTF{s4n1ty_v3r1f13d_b5aeb3dd}
```

It's a simple as downloading the file and cat'ing it.



Python Wrangling

| 10 points

Tags: Category: General Skills

AUTHOR: SYREAL

Description

Python scripts are invoked kind of like programs in the Terminal... Can you run this Python script using this password to get the flag?

Hints

`$ man python`

32,822 solves / 46,753 attempts (70%)

62% Liked

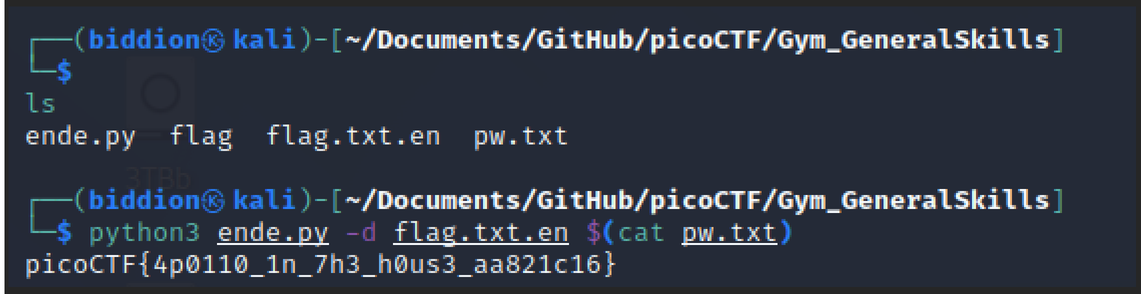
picoCTF{FLAG}

This is the syntax I've been needing to do the mini competition challenges

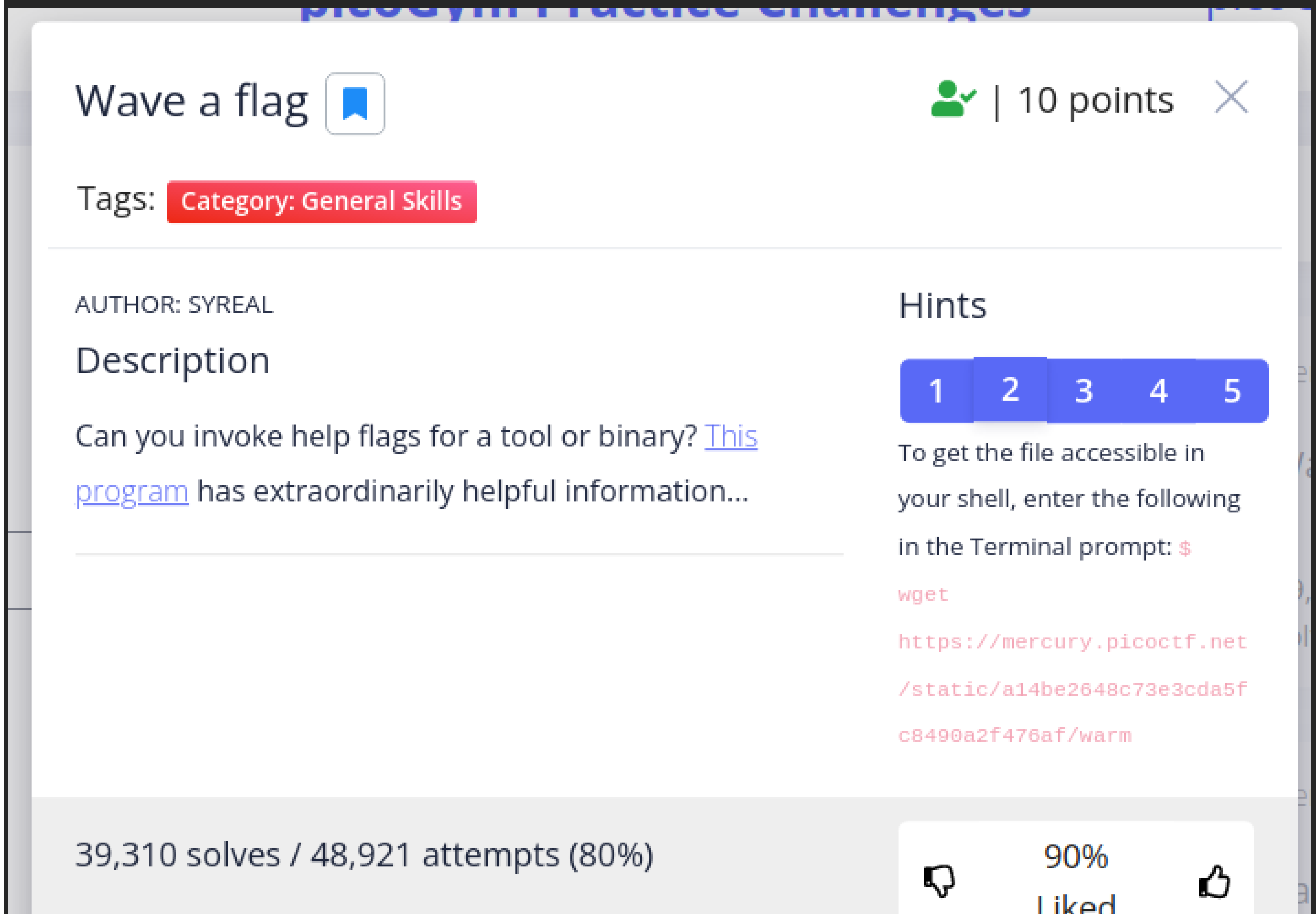
python3 ende.py -d flag.txt.en $(cat pw.txt)

-d is to turn on parser debugging output; i don't know what the means YET

man python has nothing about $ but I'm going to assume its a variable.



```
┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$
ls
ende.py  flag  flag.txt.en  pw.txt

┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ python3 ende.py -d flag.txt.en $(cat pw.txt)
picoCTF{4p0110_1n_7h3_h0us3_aa821c16}
```



Wave a flag

| 10 points

Tags: Category: General Skills

AUTHOR: SYREAL

Description

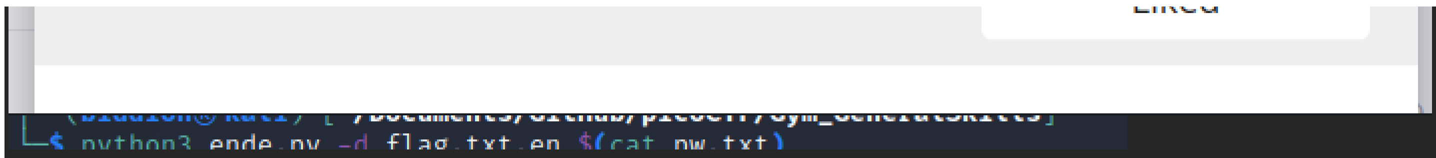
Can you invoke help flags for a tool or binary? This program has extraordinarily helpful information...

Hints

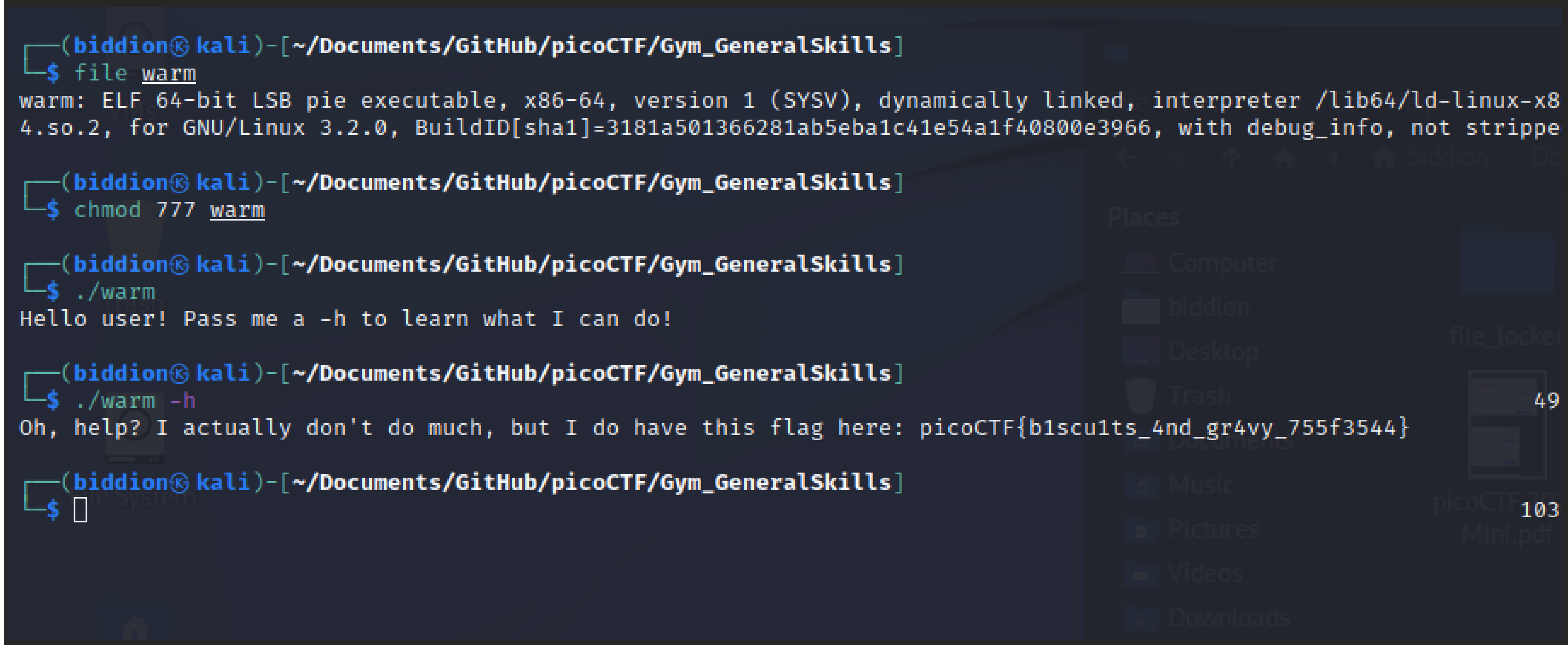
To get the file accessible in your shell, enter the following in the Terminal prompt: `$ wget https://mercury.picoctf.net/static/a14be2648c73e3cda5fc8490a2f476af/warm`

39,310 solves / 48,921 attempts (80%)

90% Liked

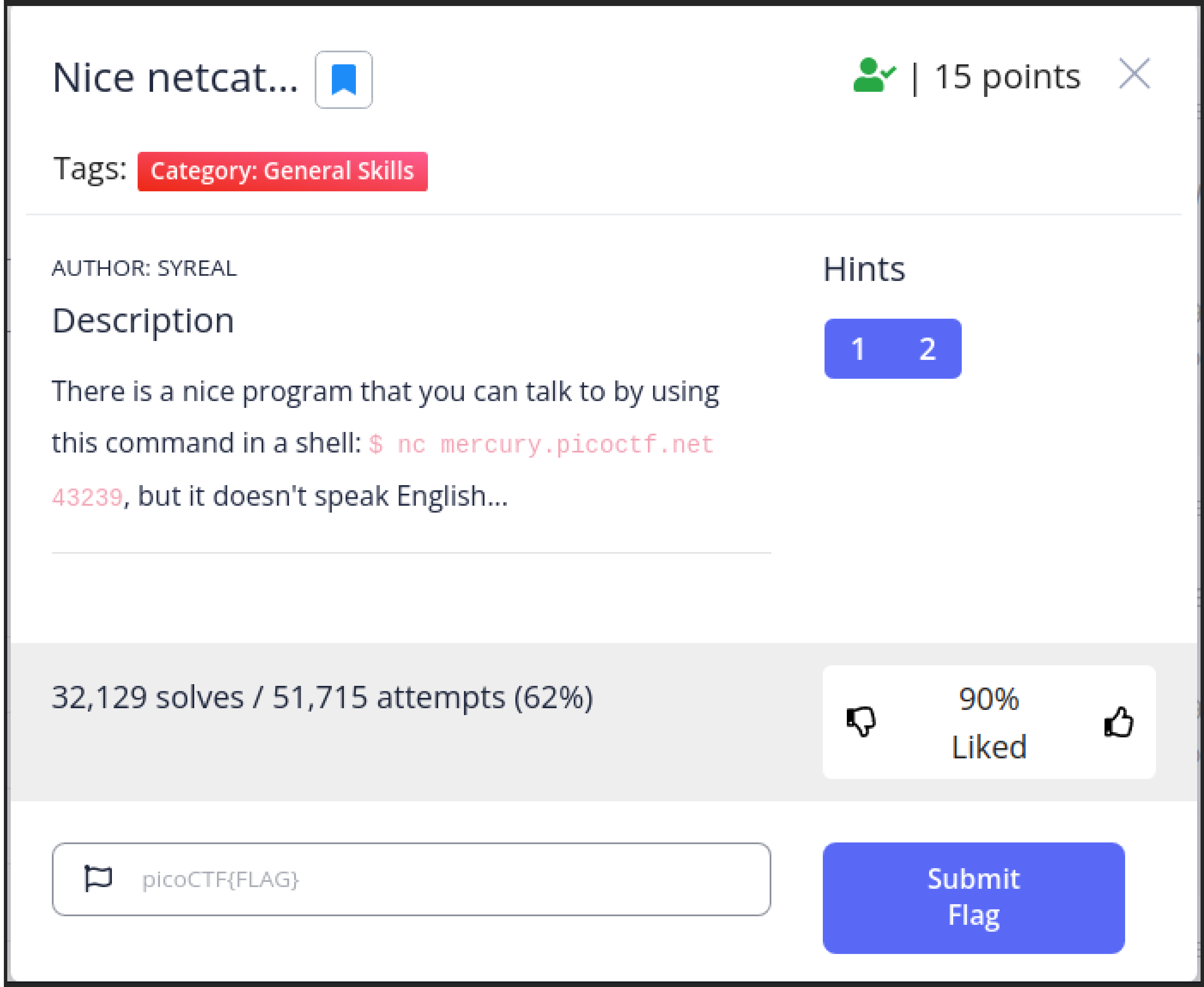


```
┌──(biddion㉿ kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ python3 ende.py -d flag.txt.en $(cat pw.txt)
```



```
┌──(biddion㉿ kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ file warm
warm: ELF 64-bit LSB pie executable, x86-64, version 1 (SYSV), dynamically linked, interpreter /lib64/ld-linux-x8
4.so.2, for GNU/Linux 3.2.0, BuildID[sha1]=3181a501366281ab5eba1c41e54a1f40800e3966, with debug_info, not stripped

┌──(biddion㉿ kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ chmod 777 warm

┌──(biddion㉿ kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ ./warm
Hello user! Pass me a -h to learn what I can do!

┌──(biddion㉿ kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ ./warm -h
Oh, help? I actually don't do much, but I do have this flag here: picoCTF{b1scu1ts_4nd_gr4vy_755f3544}

┌──(biddion㉿ kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ ▯
```

downloaded warm; saw it was elf; changed permissions and ran it.



Nice netcat...

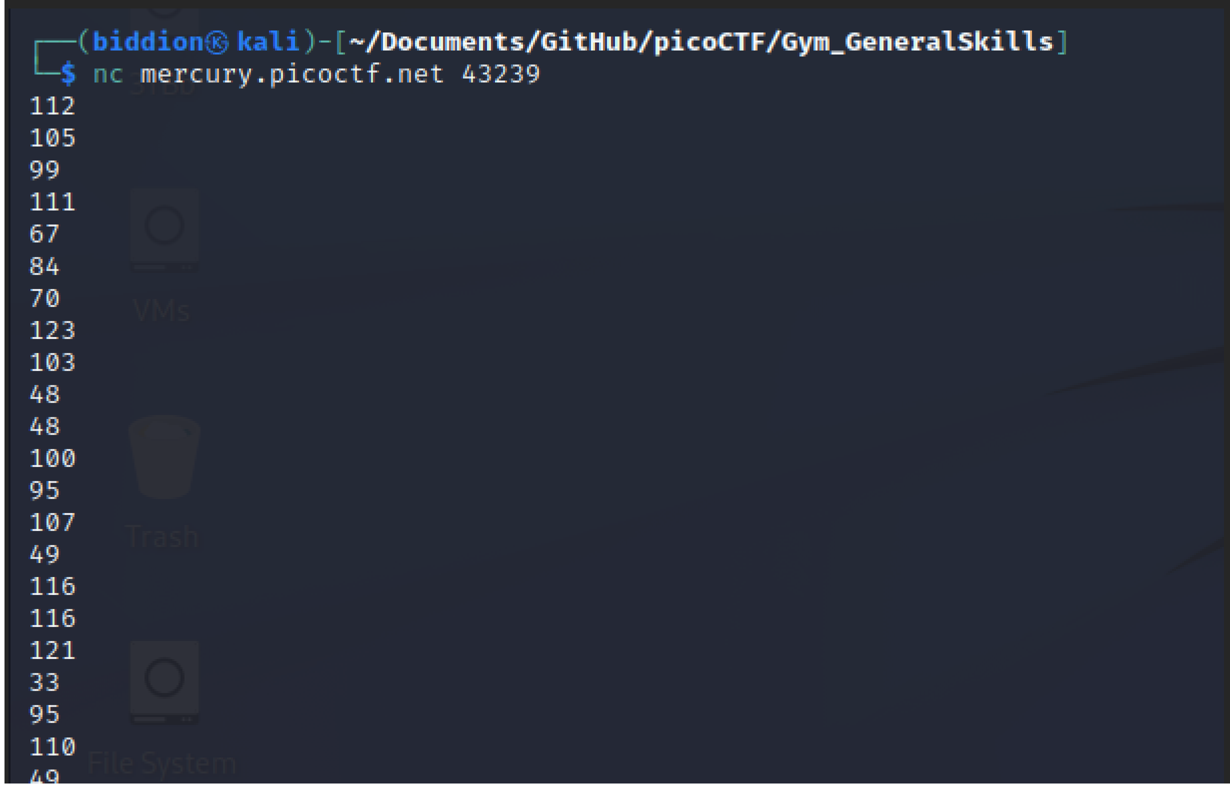
Tags: Category: General Skills

AUTHOR: SYREAL

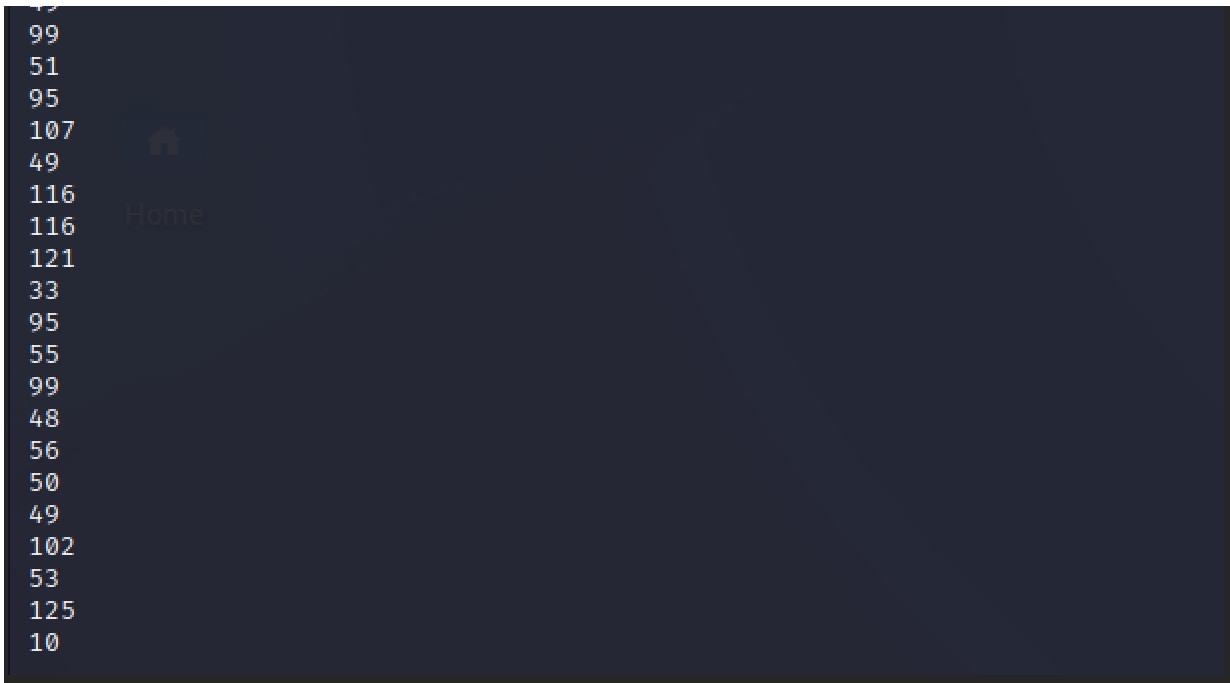
Description

There is a nice program that you can talk to by using this command in a shell: `$ nc mercury.picoctf.net 43239`, but it doesn't speak English...

32,129 solves / 51,715 attempts (62%)

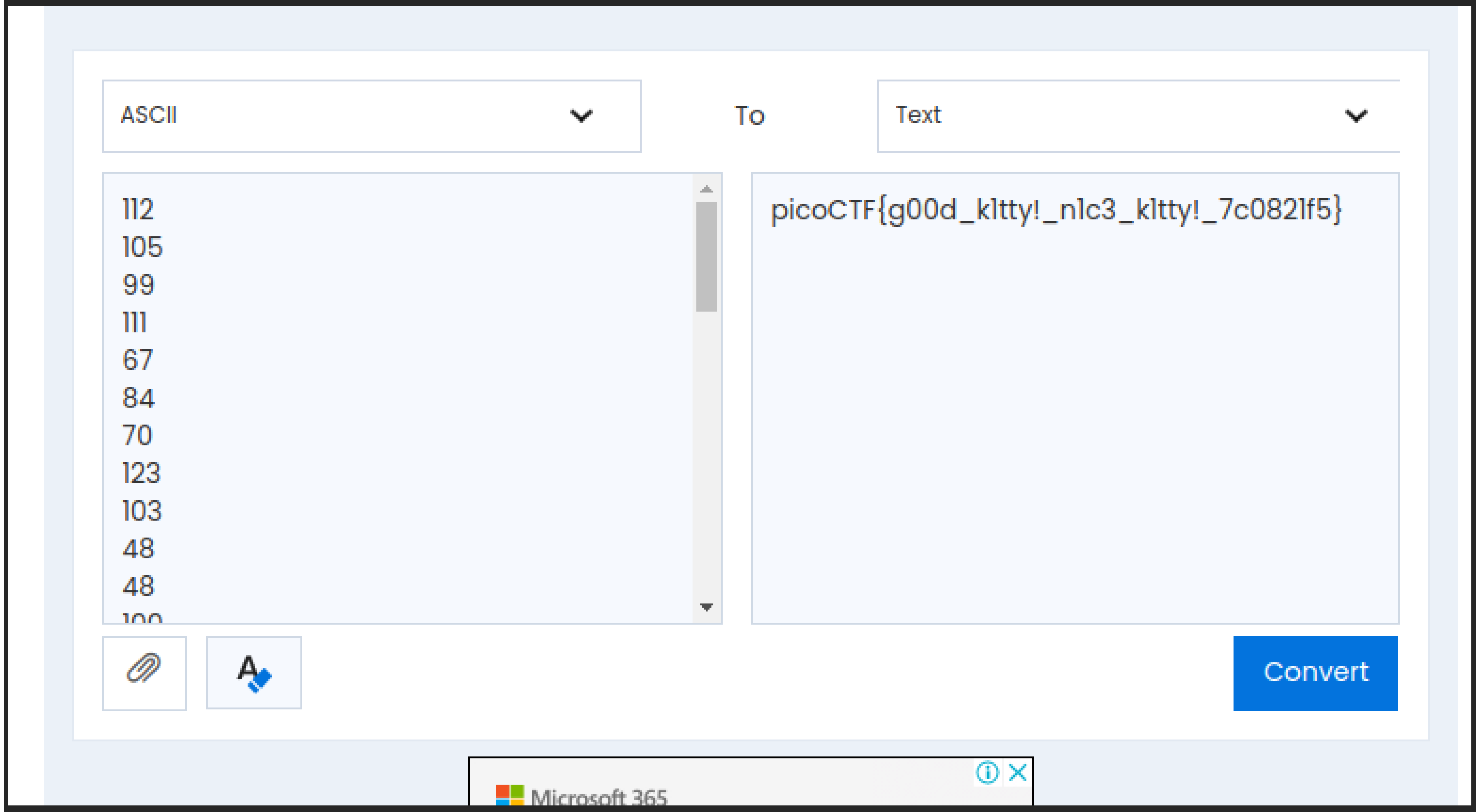


```
┌──(biddion㉿ kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ nc mercury.picoctf.net 43239
112
105
99
111
67
84
70
123
103
48
48
100
95
107
49
116
116
121
33
95
110
49
```



```
99
51
95
107
49
116
116
121
33
95
55
99
48
56
50
49
102
53
125
10
```

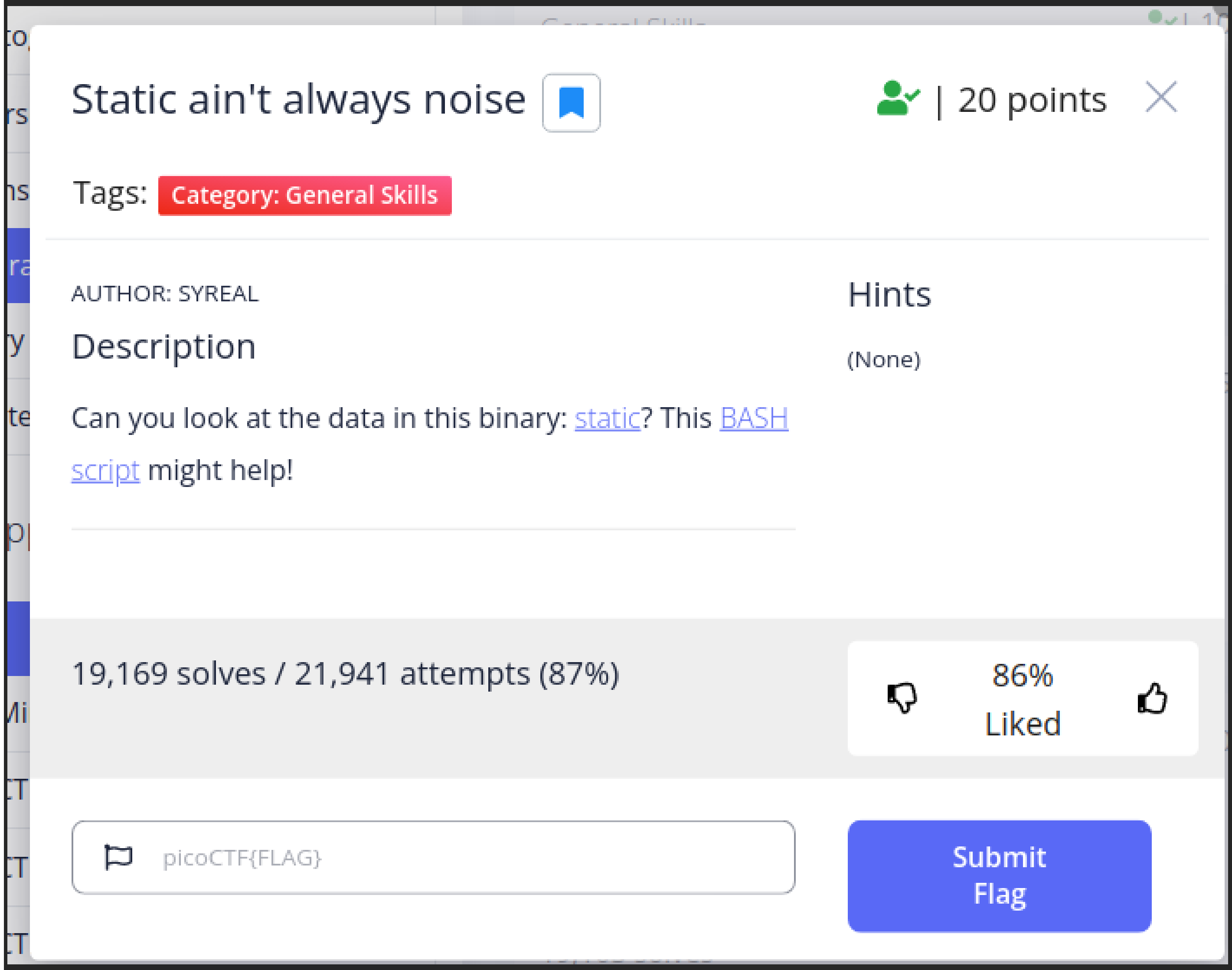
https://www.duplichecker.com/ascii-to-text.php



```
112
105
99
111
67
84
70
123
103
48
48
```

```
picoCTF{g00d_k1tty!_n1c3_k1tty!_7c0821f5}
```

using net cat produces the ascii code; converting the code gives flag



Static ain't always noise

| 20 points

Tags: Category: General Skills

AUTHOR: SYREAL

Description

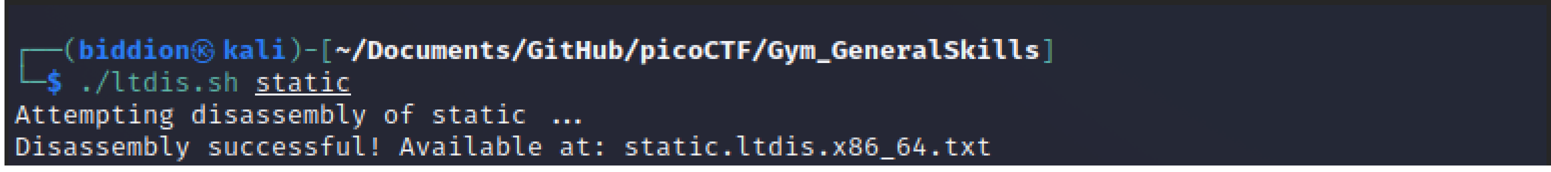
Can you look at the data in this binary: static? This BASH script might help!

Hints

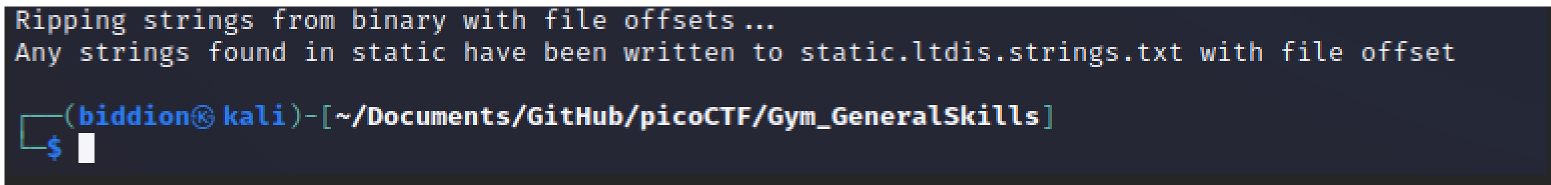
(None)

19,169 solves / 21,941 attempts (87%)

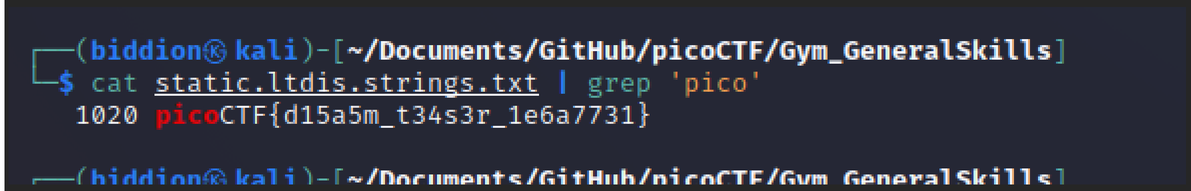
86% Liked



```
┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ ./ltdis.sh static
Attempting disassembly of static ...
Disassembly successful! Available at: static.ltdis.x86_64.txt
```

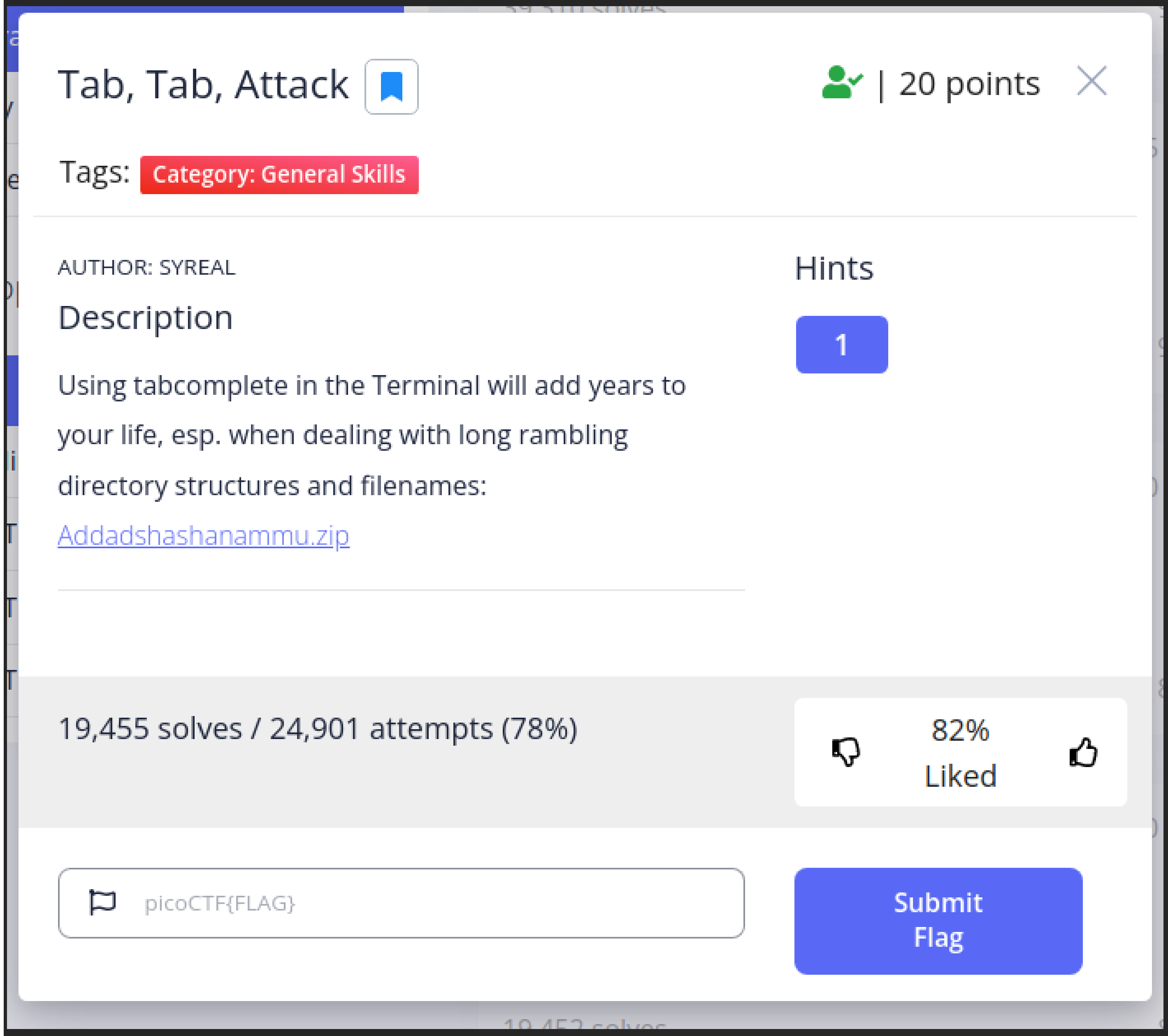


```
Ripping strings from binary with file offsets...
Any strings found in static have been written to static.ltdis.strings.txt with file offset

┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ █
```



```
┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ cat static.ltdis.strings.txt | grep 'pico'
   1020 picoCTF{d15a5m_t34s3r_1e6a7731}

┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
```

running binary with "static" as argument results in static.ltdis.string.text; grepping "pico" for the win



Tab, Tab, Attack

| 20 points

Tags: Category: General Skills

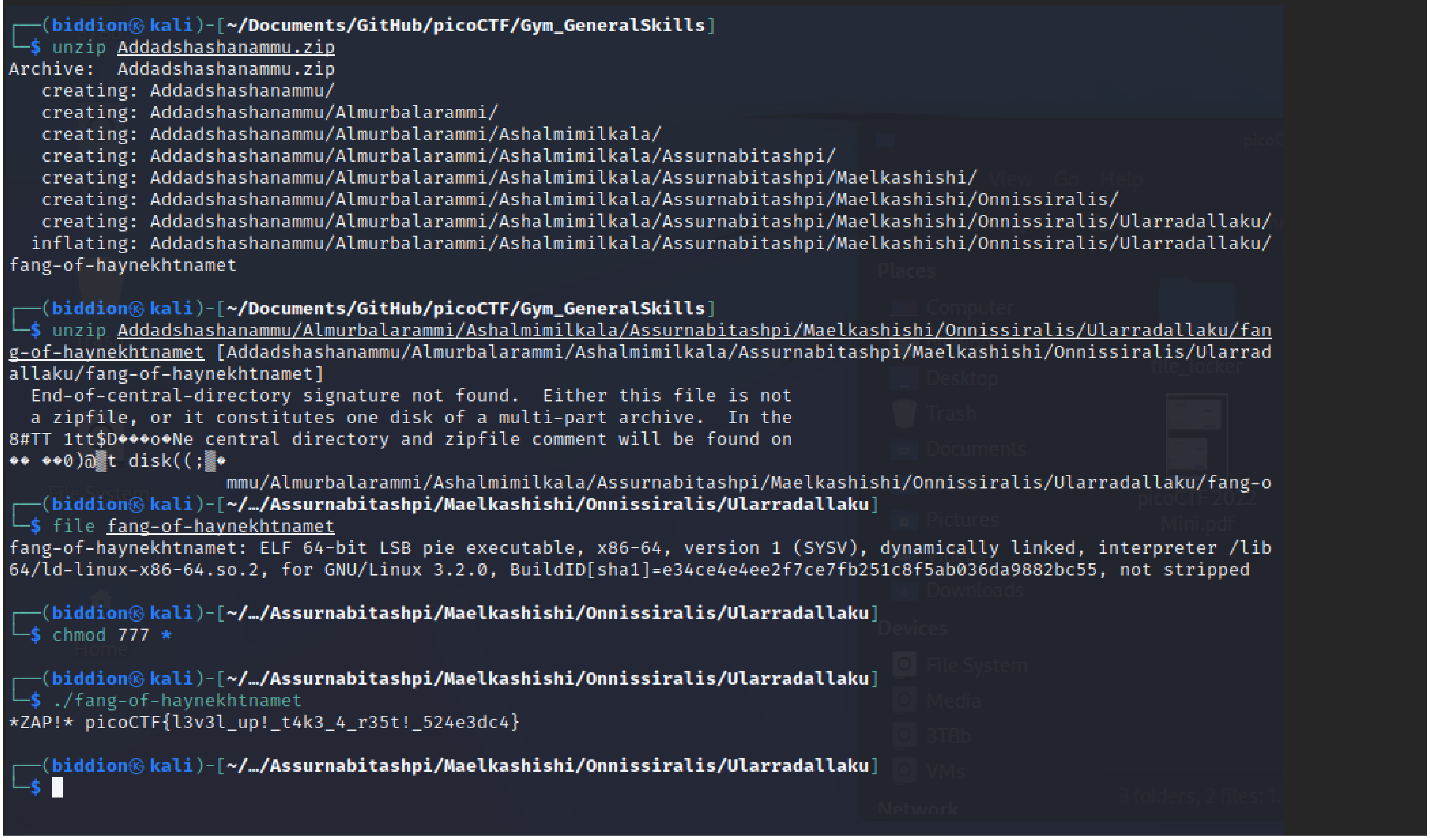
AUTHOR: SYREAL

Description

Using tabcomplete in the Terminal will add years to your life, esp. when dealing with long rambling directory structures and filenames: Addadshashanammu.zip

Hints

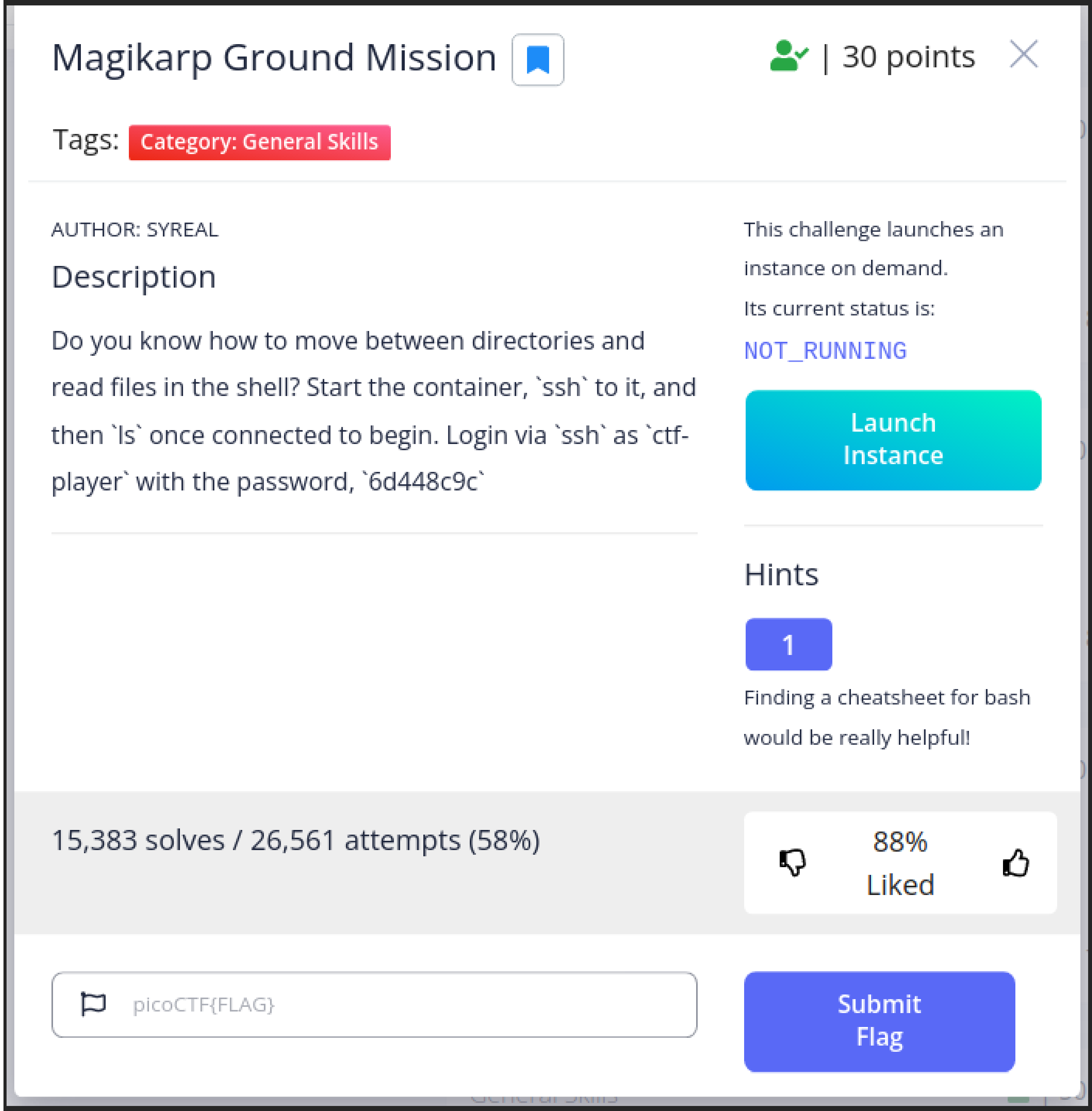
19,455 solves / 24,901 attempts (78%)



```
┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ unzip Addadshashanammu.zip
Archive:  Addadshashanammu.zip
   creating: Addadshashanammu/
   creating: Addadshashanammu/Almurbalarammi/
   creating: Addadshashanammu/Almurbalarammi/Ashalmimilkala/
   creating: Addadshashanammu/Almurbalarammi/Ashalmimilkala/Assurnabitashpi/
   creating: Addadshashanammu/Almurbalarammi/Ashalmimilkala/Assurnabitashpi/Maelkashishi/
   creating: Addadshashanammu/Almurbalarammi/Ashalmimilkala/Assurnabitashpi/Maelkashishi/Onnissiralis/
   creating: Addadshashanammu/Almurbalarammi/Ashalmimilkala/Assurnabitashpi/Maelkashishi/Onnissiralis/Ularradallaku/
  inflating: Addadshashanammu/Almurbalarammi/Ashalmimilkala/Assurnabitashpi/Maelkashishi/Onnissiralis/Ularradallaku/
fang-of-haynekhtnamet

┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ unzip Addadshashanammu/Almurbalarammi/Ashalmimilkala/Assurnabitashpi/Maelkashishi/Onnissiralis/Ularradallaku/fan
g-of-haynekhtnamet [Addadshashanammu/Almurbalarammi/Ashalmimilkala/Assurnabitashpi/Maelkashishi/Onnissiralis/Ularrad
allaku/fang-of-haynekhtnamet]
  End-of-central-directory signature not found.  Either this file is not
  a zipfile, or it constitutes one disk of a multi-part archive.  In the
8#TT 1tt$D◆◆◆o◆Ne central directory and zipfile comment will be found on
◆◆ ◆◆0)@▒t disk((;▒◆
                    mmu/Almurbalarammi/Ashalmimilkala/Assurnabitashpi/Maelkashishi/Onnissiralis/Ularradallaku/fang-o
┌──(biddion㉿kali)-[~/…/Assurnabitashpi/Maelkashishi/Onnissiralis/Ularradallaku]
└─$ file fang-of-haynekhtnamet
fang-of-haynekhtnamet: ELF 64-bit LSB pie executable, x86-64, version 1 (SYSV), dynamically linked, interpreter /lib
64/ld-linux-x86-64.so.2, for GNU/Linux 3.2.0, BuildID[sha1]=e34ce4e4ee2f7ce7fb251c8f5ab036da9882bc55, not stripped

┌──(biddion㉿kali)-[~/…/Assurnabitashpi/Maelkashishi/Onnissiralis/Ularradallaku]
└─$ chmod 777 *

┌──(biddion㉿kali)-[~/…/Assurnabitashpi/Maelkashishi/Onnissiralis/Ularradallaku]
└─$ ./fang-of-haynekhtnamet
*ZAP!* picoCTF{l3v3l_up!_t4k3_4_r35t!_524e3dc4}

┌──(biddion㉿kali)-[~/…/Assurnabitashpi/Maelkashishi/Onnissiralis/Ularradallaku]
└─$ █
```

apparently you can unzip levels in one command with tab key

run binary for win



Magikarp Ground Mission

| 30 points

Tags: Category: General Skills

AUTHOR: SYREAL

Description

Do you know how to move between directories and read files in the shell? Start the container, `ssh` to it, and then `ls` once connected to begin. Login via `ssh` as `ctf-player` with the password, `6d448c9c`

This challenge launches an instance on demand.

Its current status is:

NOT_RUNNING

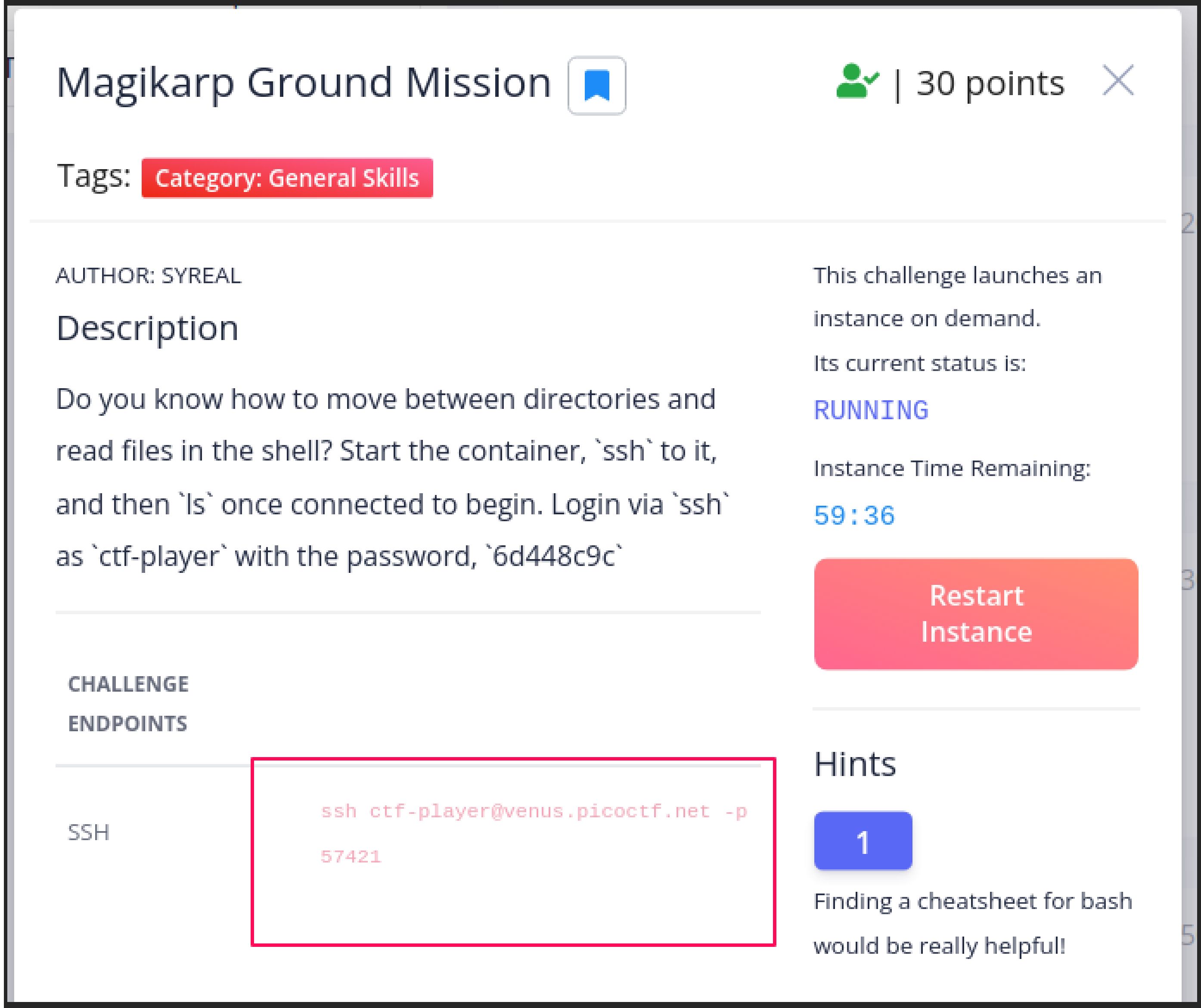
Hints

1

Finding a cheatsheet for bash would be really helpful!

15,383 solves / 26,561 attempts (58%)

88% Liked



Magikarp Ground Mission

| 30 points

Tags: Category: General Skills

AUTHOR: SYREAL

Description

Do you know how to move between directories and read files in the shell? Start the container, `ssh` to it, and then `ls` once connected to begin. Login via `ssh` as `ctf-player` with the password, `6d448c9c`

This challenge launches an instance on demand.

Its current status is:

RUNNING

Instance Time Remaining:

59:36

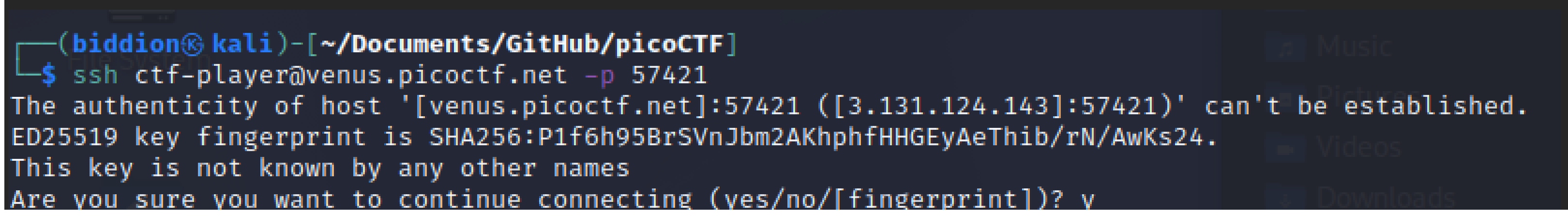
CHALLENGE ENDPOINTS

SSH `ssh ctf-player@venus.picoctf.net -p 57421`

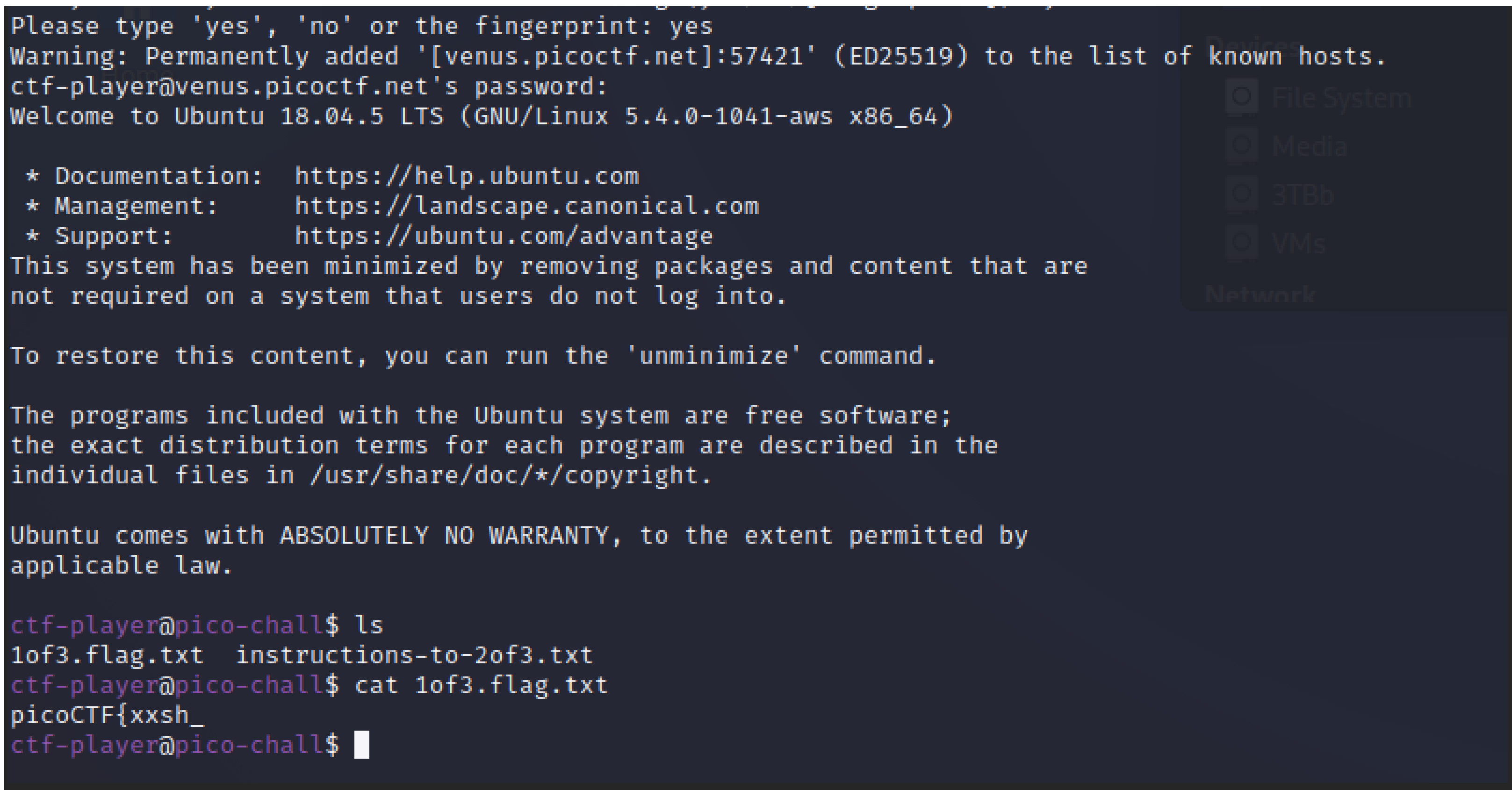
Hints

1

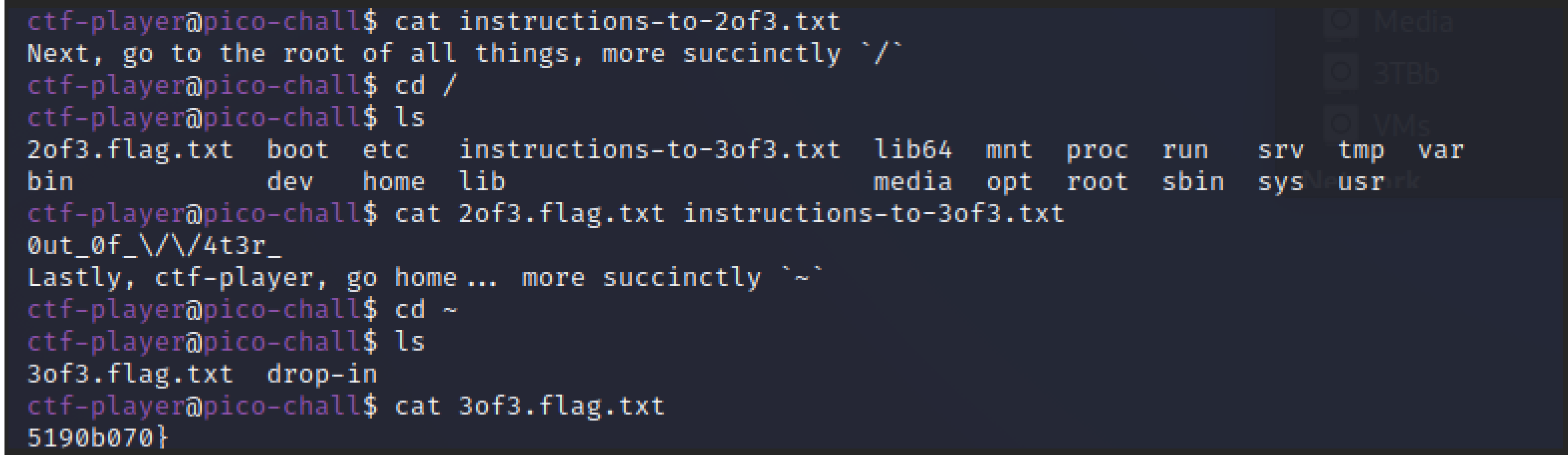
Finding a cheatsheet for bash would be really helpful!



```
┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF]
└─$ ssh ctf-player@venus.picoctf.net -p 57421
The authenticity of host '[venus.picoctf.net]:57421 ([3.131.124.143]:57421)' can't be established.
ED25519 key fingerprint is SHA256:P1f6h95BrSVnJbm2AKhphfHHGEyAeThib/rN/AwKs24.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? y
```

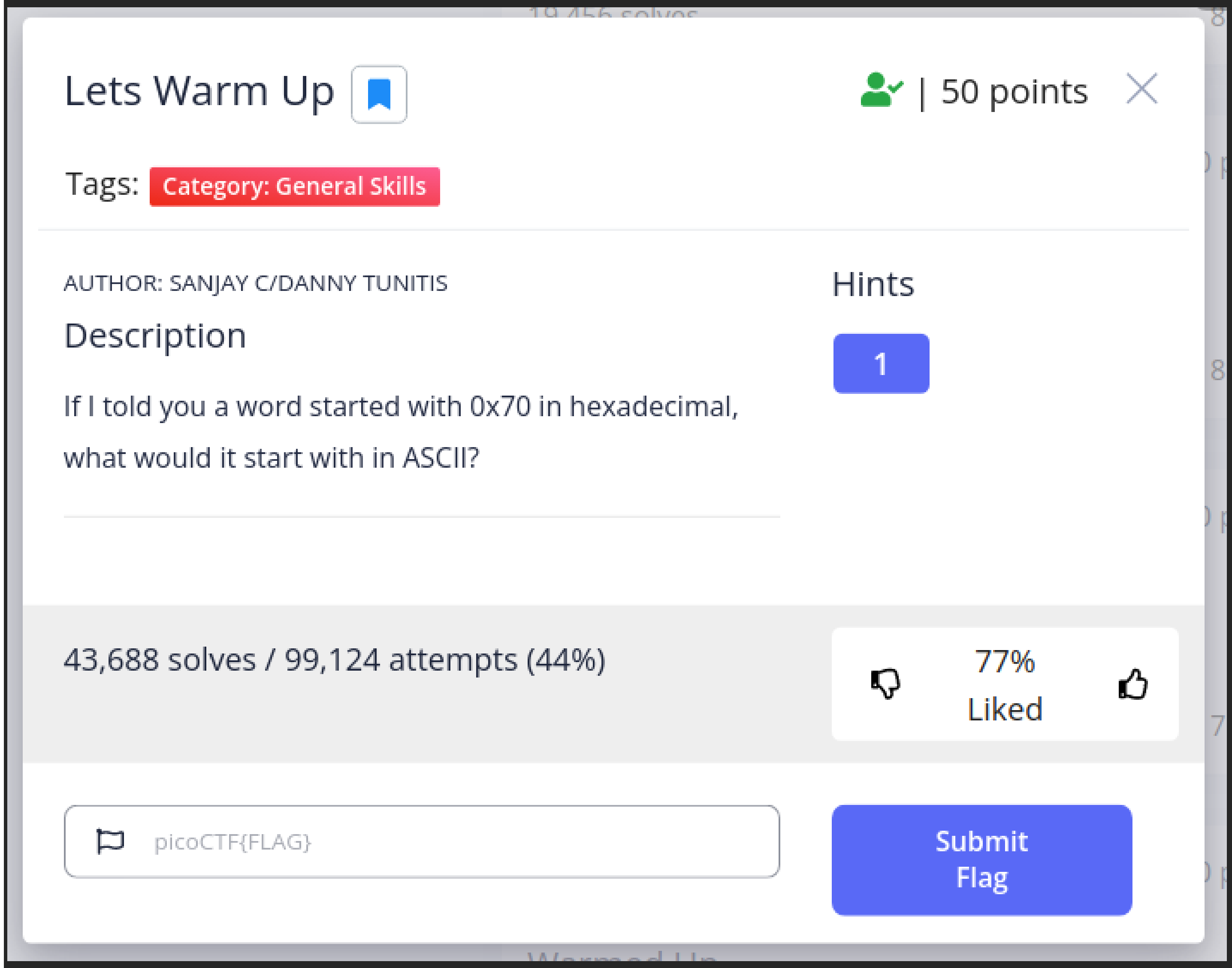


```
Please type 'yes', 'no' or the fingerprint: yes
Warning: Permanently added '[venus.picoctf.net]:57421' (ED25519) to the list of known hosts.
ctf-player@venus.picoctf.net's password:
Welcome to Ubuntu 18.04.5 LTS (GNU/Linux 5.4.0-1041-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage
This system has been minimized by removing packages and content that are
not required on a system that users do not log into.

To restore this content, you can run the 'unminimize' command.

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

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

ctf-player@pico-chall$ ls
1of3.flag.txt  instructions-to-2of3.txt
ctf-player@pico-chall$ cat 1of3.flag.txt
picoCTF{xxsh_
ctf-player@pico-chall$ █
```



```
ctf-player@pico-chall$ cat instructions-to-2of3.txt
Next, go to the root of all things, more succinctly `/`
ctf-player@pico-chall$ cd /
ctf-player@pico-chall$ ls
2of3.flag.txt  boot  etc   instructions-to-3of3.txt  lib64  mnt  proc  run   srv  tmp  var
bin            dev   home  lib                       media  opt  root  sbin  sys  usr
ctf-player@pico-chall$ cat 2of3.flag.txt instructions-to-3of3.txt
0ut_0f_\/\/4t3r_
Lastly, ctf-player, go home... more succinctly `~`
ctf-player@pico-chall$ cd ~
ctf-player@pico-chall$ ls
3of3.flag.txt  drop-in
ctf-player@pico-chall$ cat 3of3.flag.txt
5190b070}
```

ssh login > cat 1 of 3 > cd / > cat 2 of 3 / cd ~ cat 3 of 3 > celebrate



Lets Warm Up

Tags: Category: General Skills

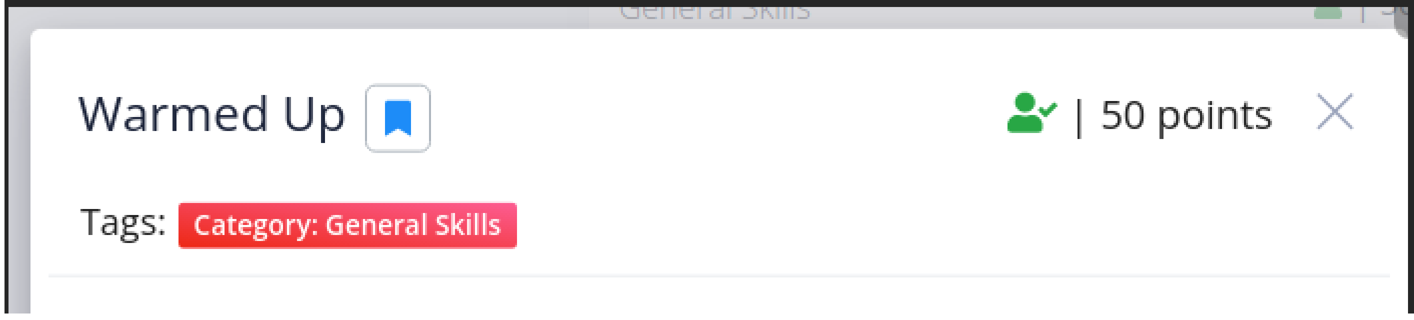
AUTHOR: SANJAY C/DANNY TUNITIS

Description

If I told you a word started with 0x70 in hexadecimal, what would it start with in ASCII?

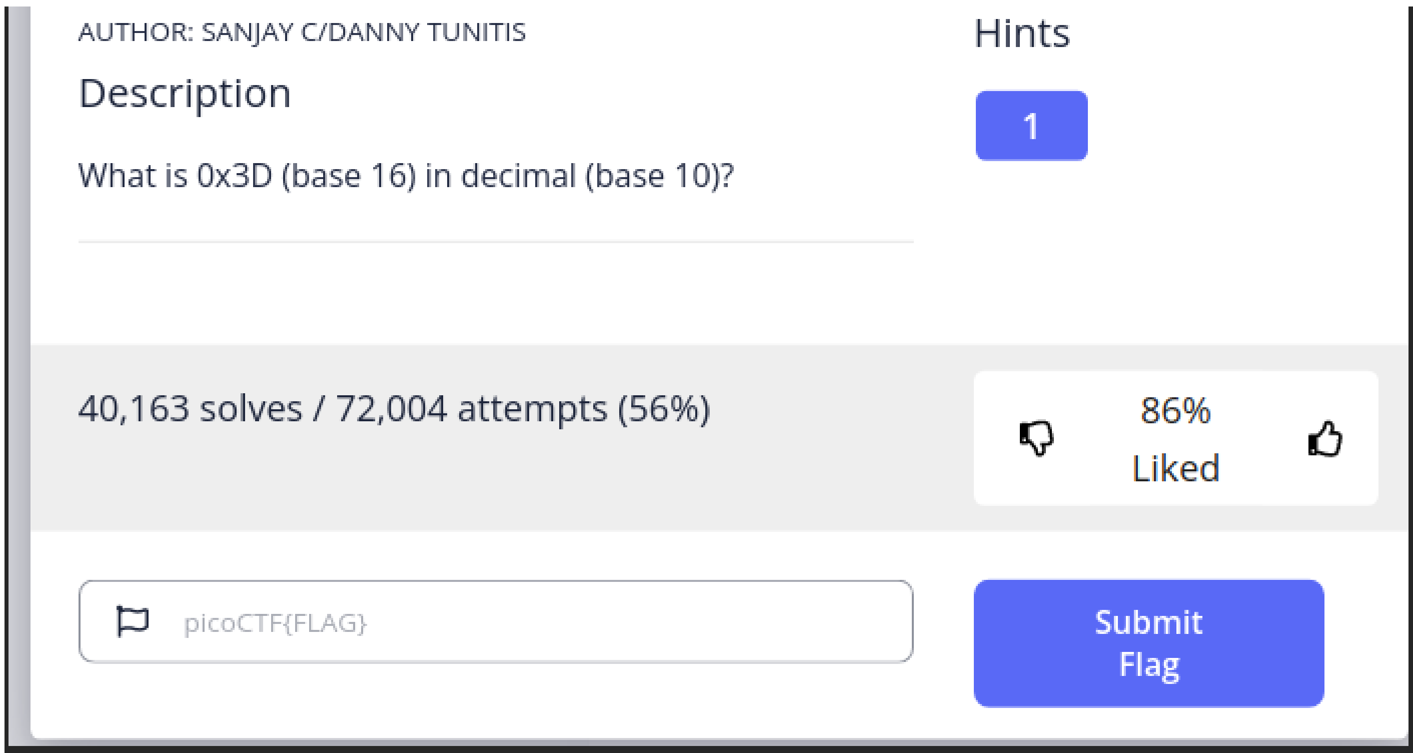
43,688 solves / 99,124 attempts (44%)

The answer is p



Warmed Up

Tags: Category: General Skills

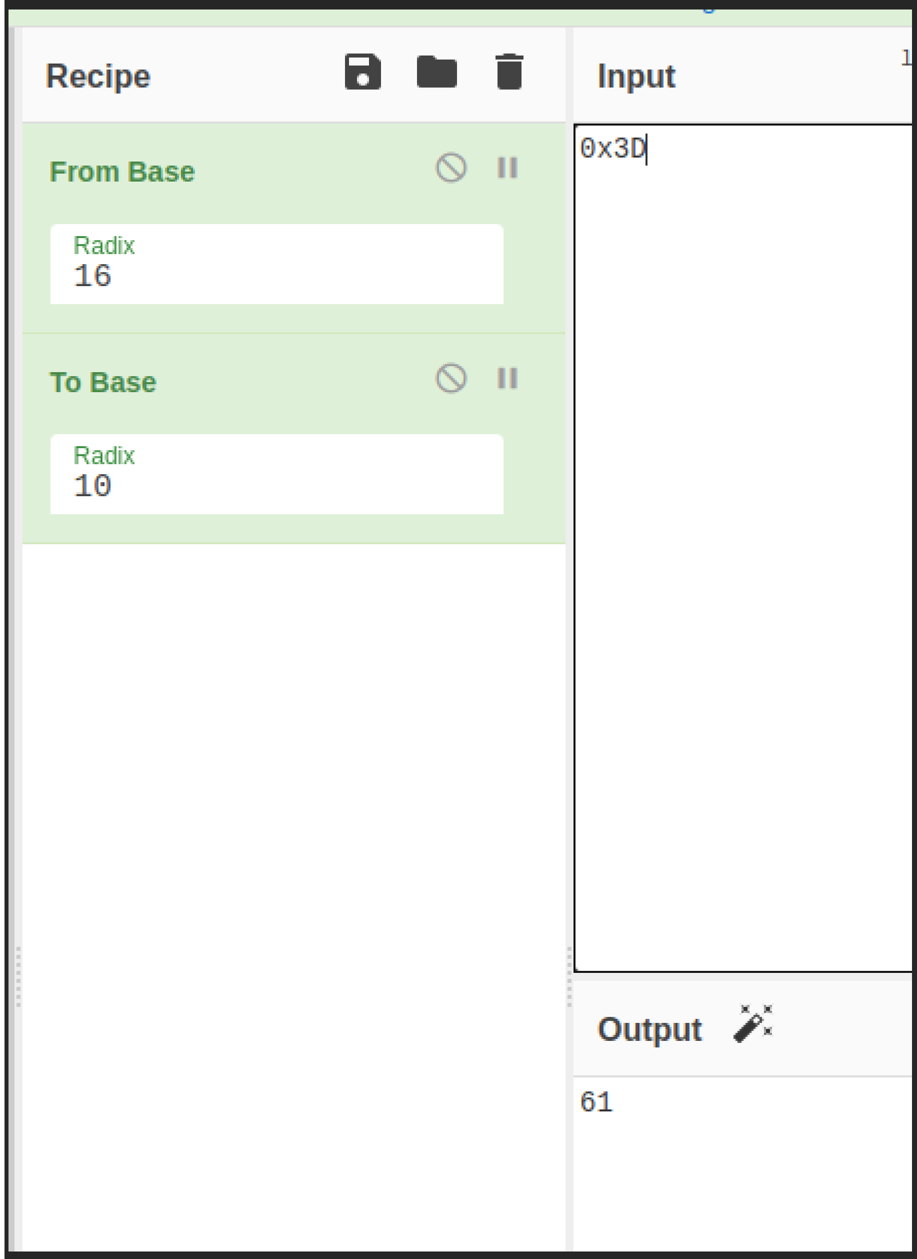


AUTHOR: SANJAY C/DANNY TUNITIS

Description

What is 0x3D (base 16) in decimal (base 10)?

40,163 solves / 72,004 attempts (56%)



Recipe

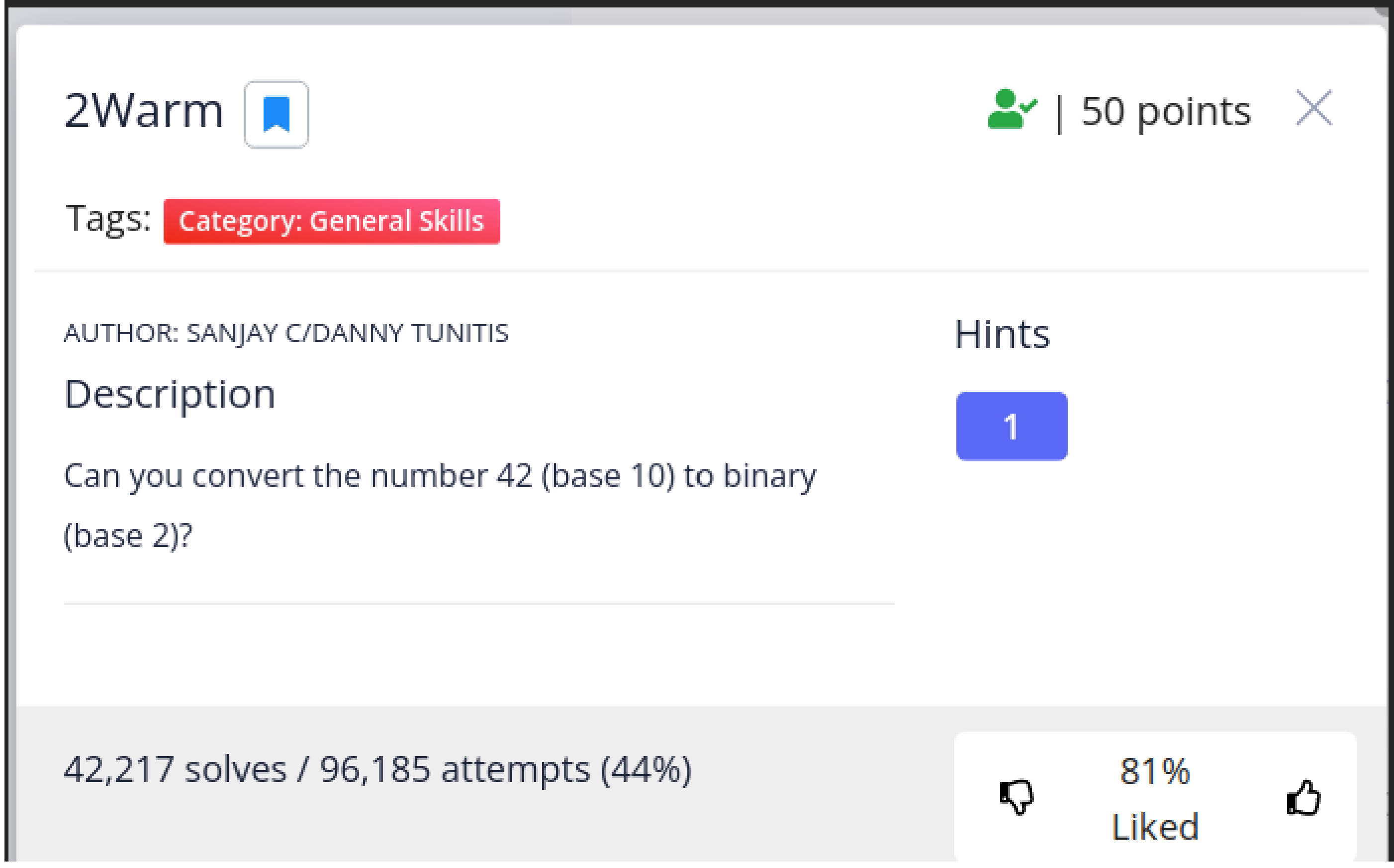
From Base
Radix
16

To Base
Radix
10

Input
```
0x3D
```

Output
```
61
```

Cyberchef converted



2Warm

50 points

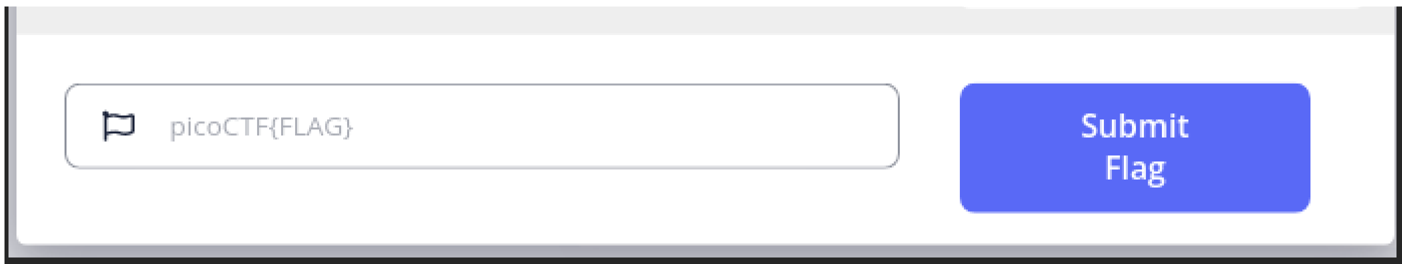
Tags: Category: General Skills

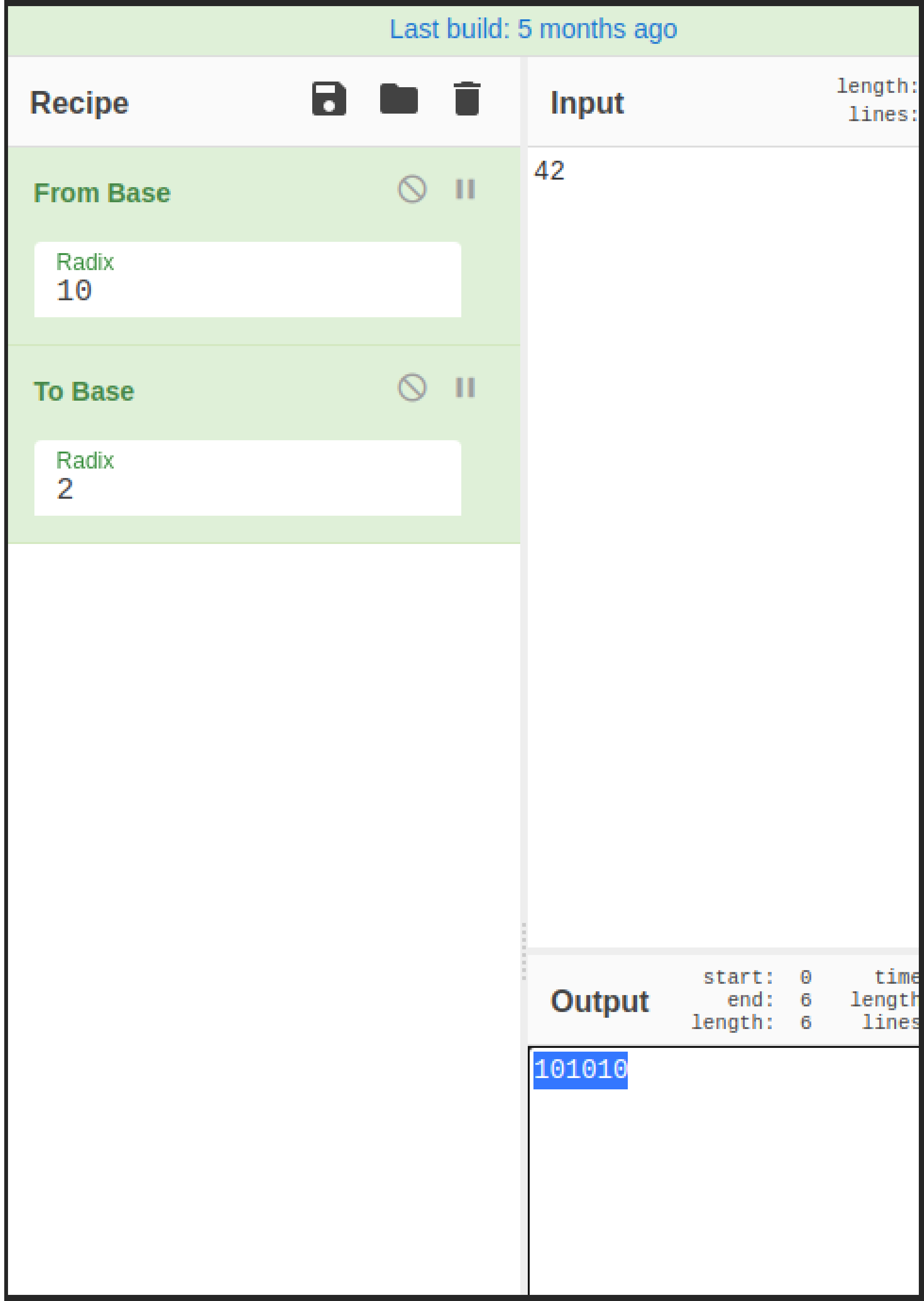
AUTHOR: SANJAY C/DANNY TUNITIS

Description

Can you convert the number 42 (base 10) to binary (base 2)?

42,217 solves / 96,185 attempts (44%)





From Base

Radix 10

To Base

Radix 2

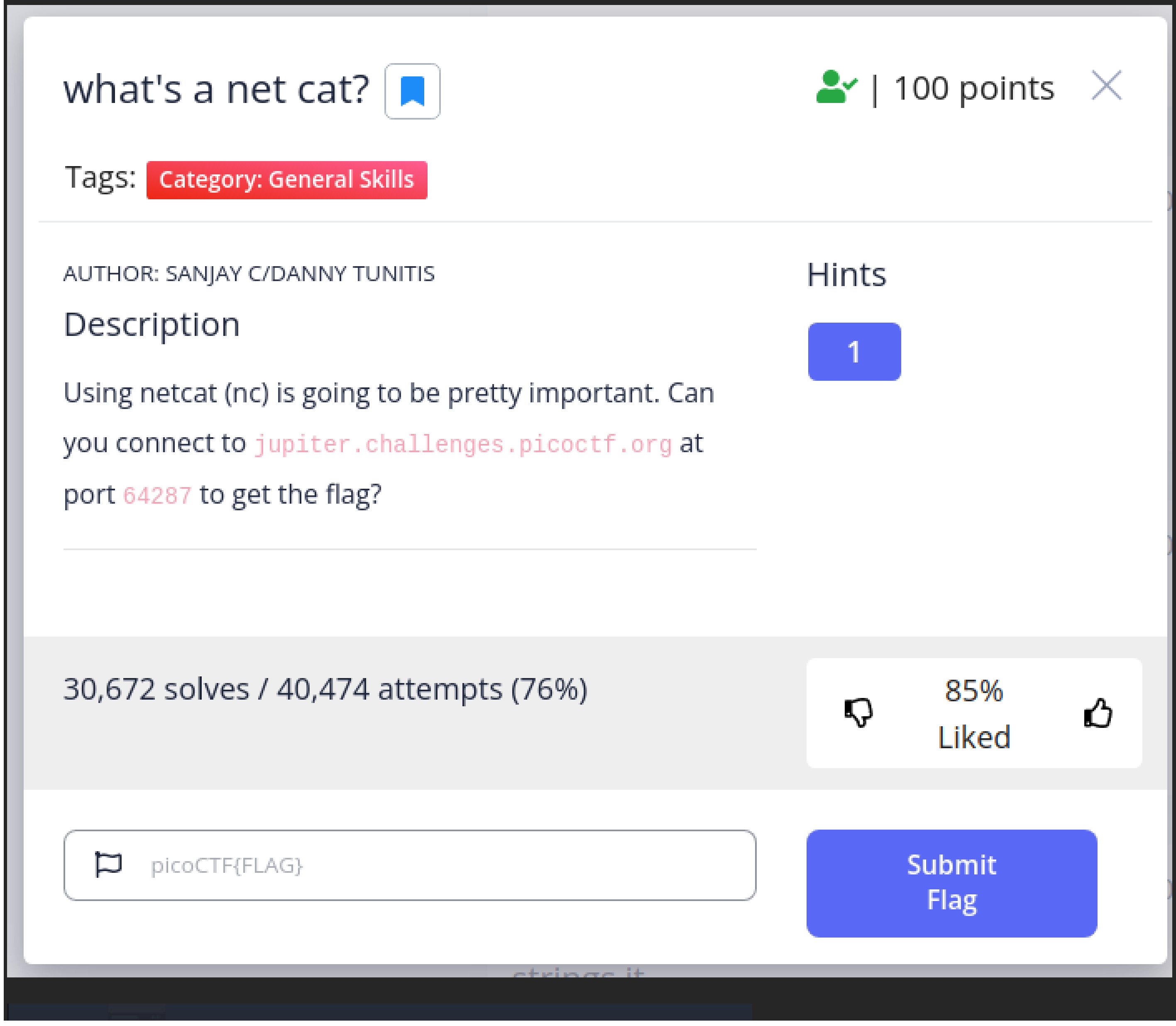
Input: length: lines:

```
42
```

Output: start: 0 end: 6 length: 6 time length lines

```
101010
```

picoCTF{101010}



what's a net cat?

| 100 points

Tags: Category: General Skills

AUTHOR: SANJAY C/DANNY TUNITIS

Description

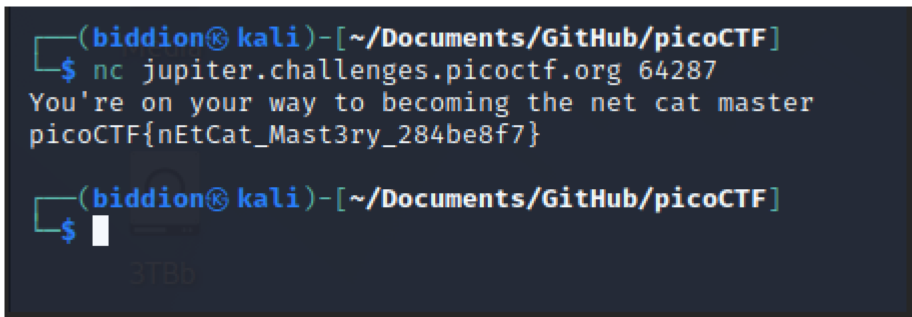
Using netcat (nc) is going to be pretty important. Can you connect to `jupiter.challenges.picoctf.org` at port `64287` to get the flag?

Hints

1

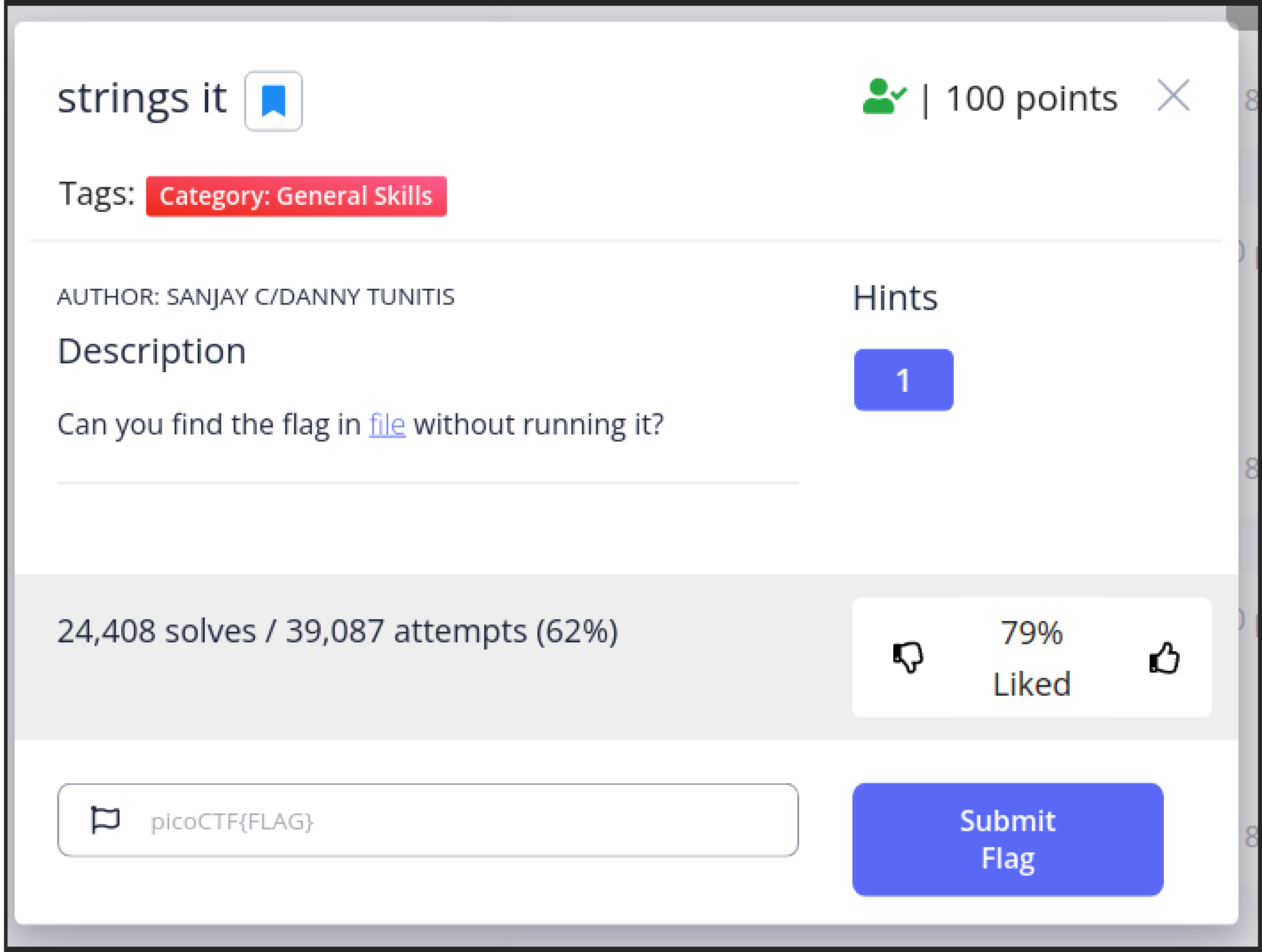
30,672 solves / 40,474 attempts (76%)

85% Liked



```
┌──(biddion㉿ kali)-[~/Documents/GitHub/picoCTF]
└─$ nc jupiter.challenges.picoctf.org 64287
You're on your way to becoming the net cat master
picoCTF{nEtCat_Mast3ry_284be8f7}

┌──(biddion㉿ kali)-[~/Documents/GitHub/picoCTF]
└─$ █
```

nc jupiter.challenges.picoctf.org 64287



strings it

Tags: Category: General Skills

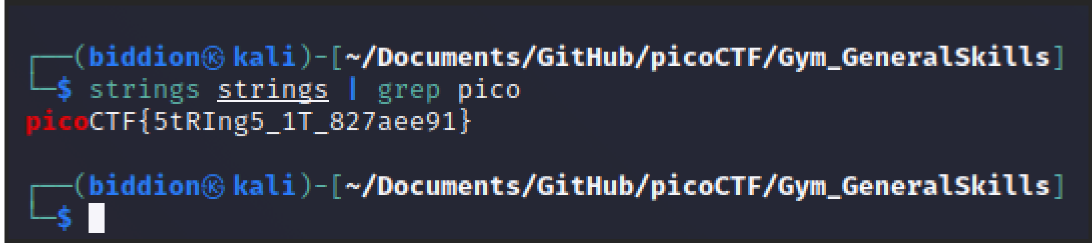
AUTHOR: SANJAY C/DANNY TUNITIS

Description

Can you find the flag in file without running it?

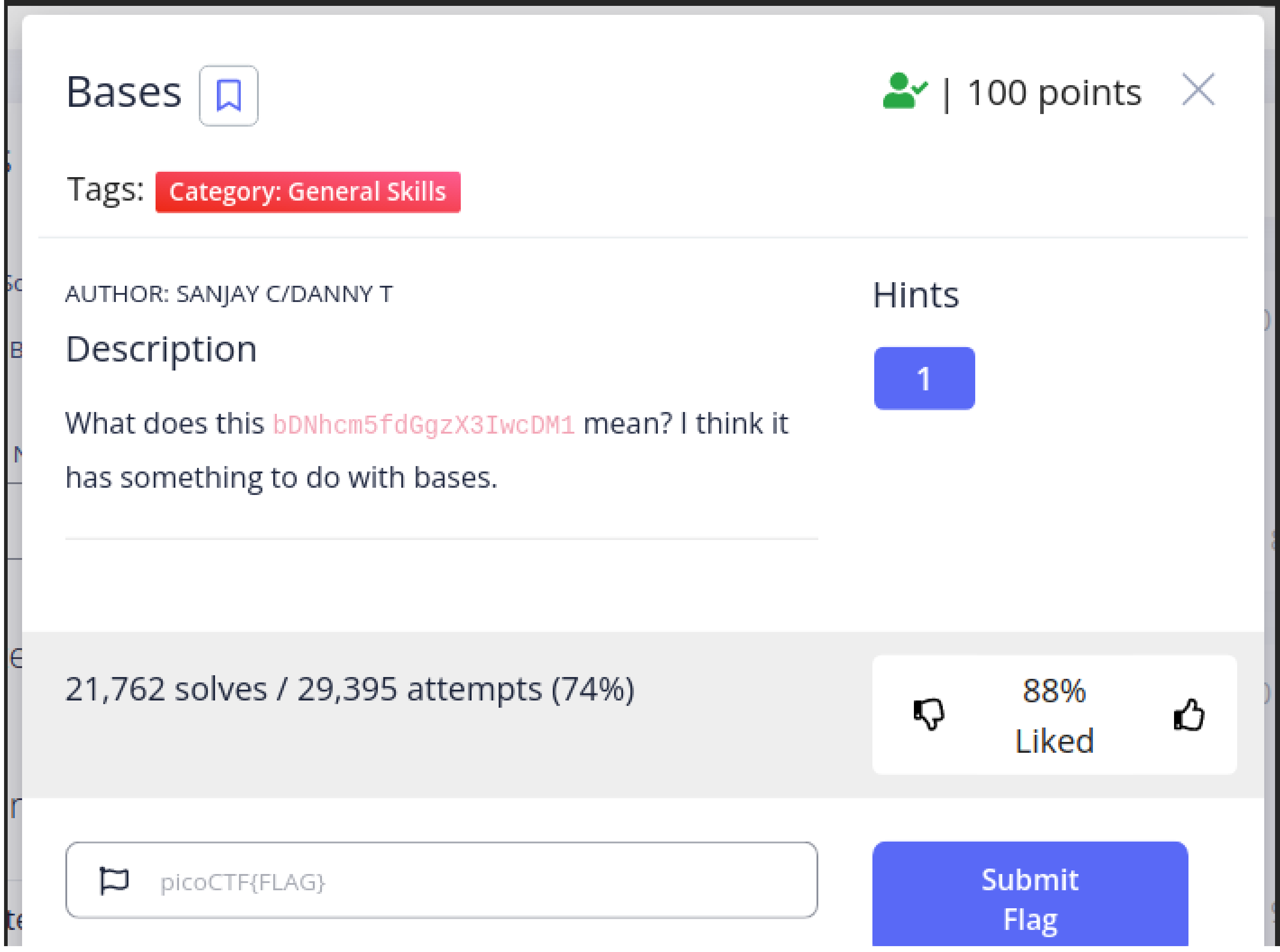
24,408 solves / 39,087 attempts (62%)

79% Liked



```
┌──(biddion㉿ kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ strings strings | grep pico
picoCTF{5tRIng5_1T_827aee91}

┌──(biddion㉿ kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ █
```

strings strings | grep pico



Bases

Tags: Category: General Skills

AUTHOR: SANJAY C/DANNY T

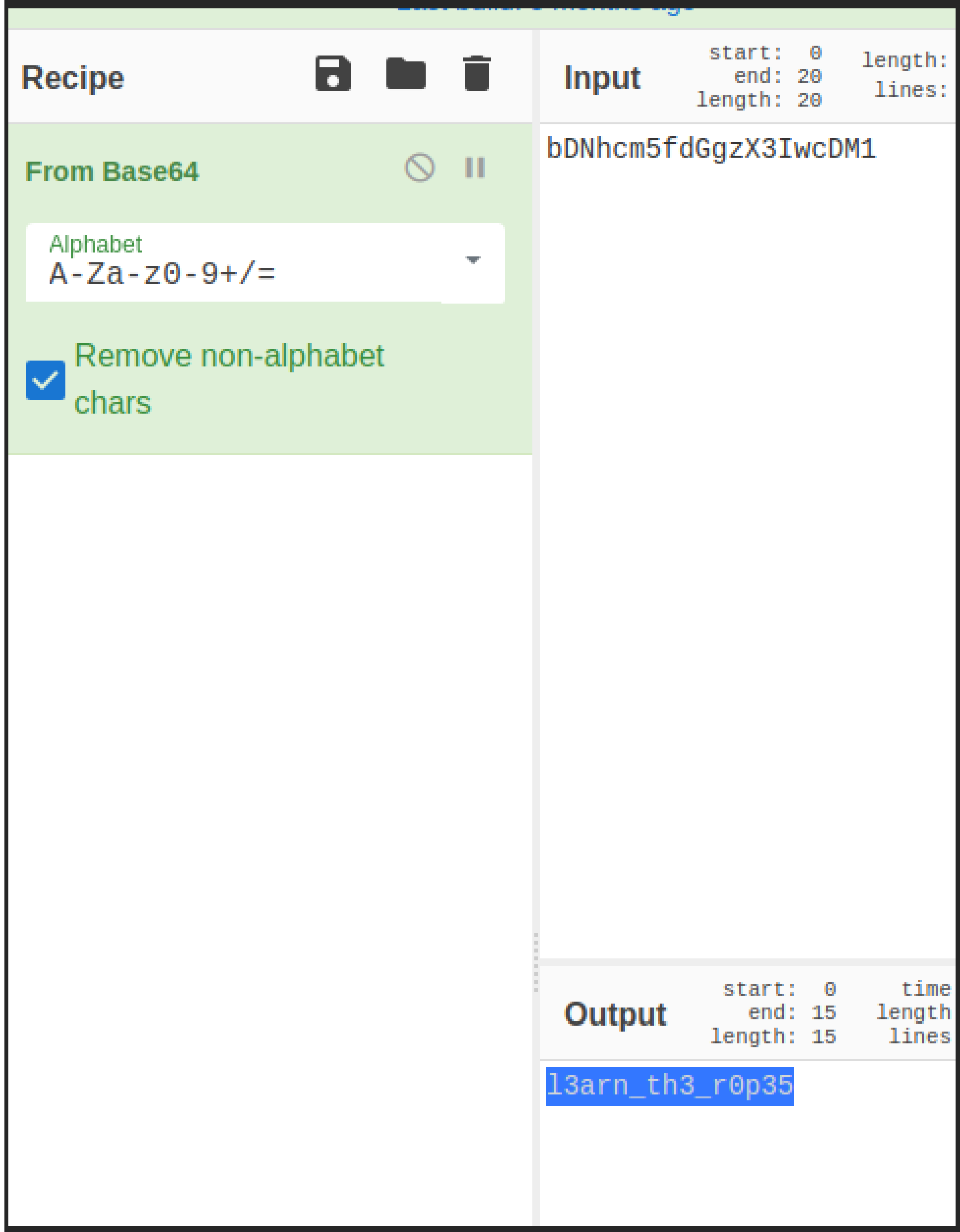
Description

What does this bDNhcm5fdGgzX3IwcDM1 mean? I think it has something to do with bases.

21,762 solves / 29,395 attempts (74%)

88% Liked

Exploitation



From Base64

Alphabet
A-Za-z0-9+/=

☑ Remove non-alphabet chars

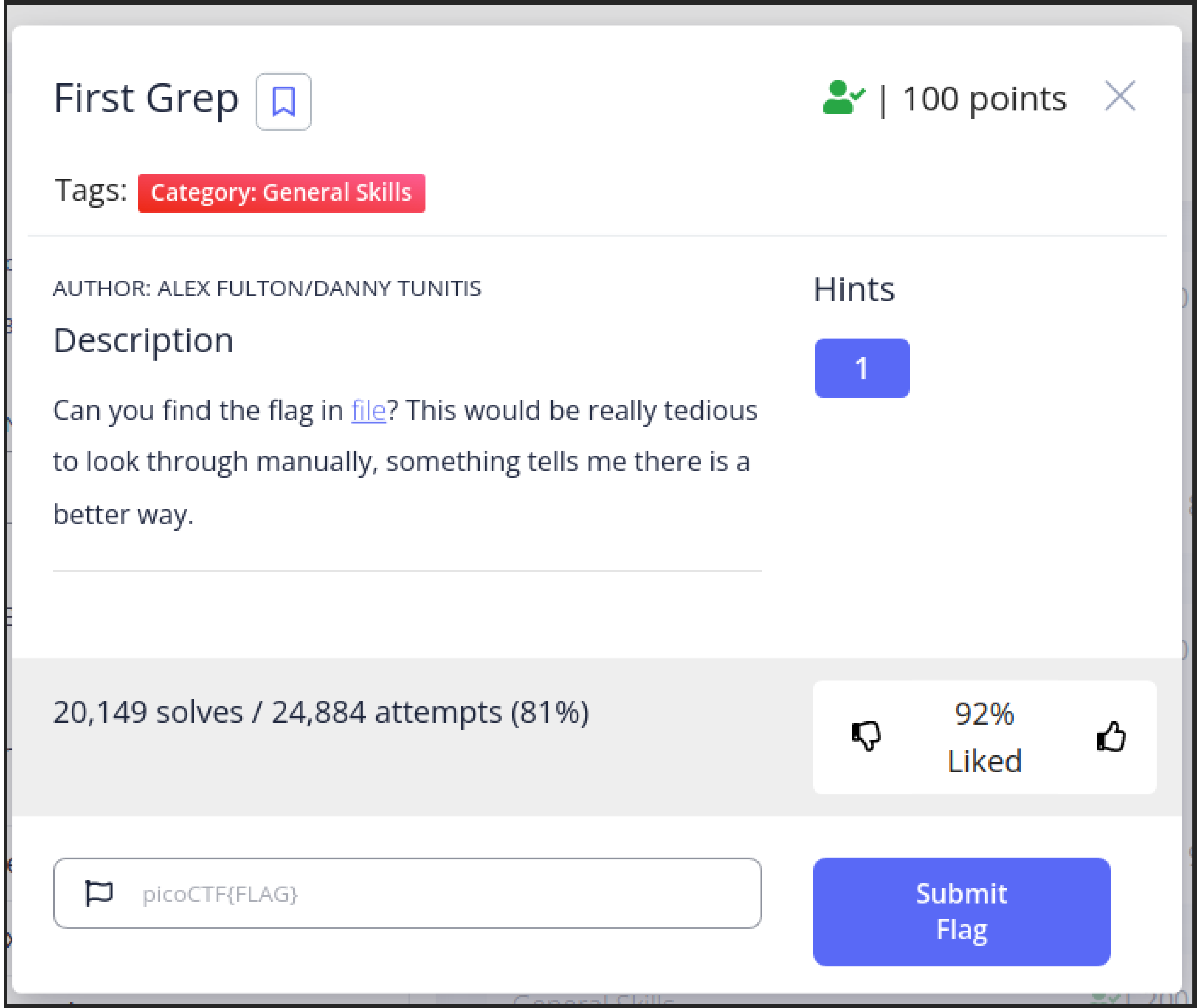
```
start: 0   length:
  end: 20   lines:
length: 20
```

```
bDNhcm5fdGgzX3IwcDM1
```

```
start: 0     time
  end: 15  length
length: 15  lines
```

```
l3arn_th3_r0p35
```

from base 64
l3arn_th3_r0p35



First Grep

| 100 points

Tags: Category: General Skills

AUTHOR: ALEX FULTON/DANNY TUNITIS

Description

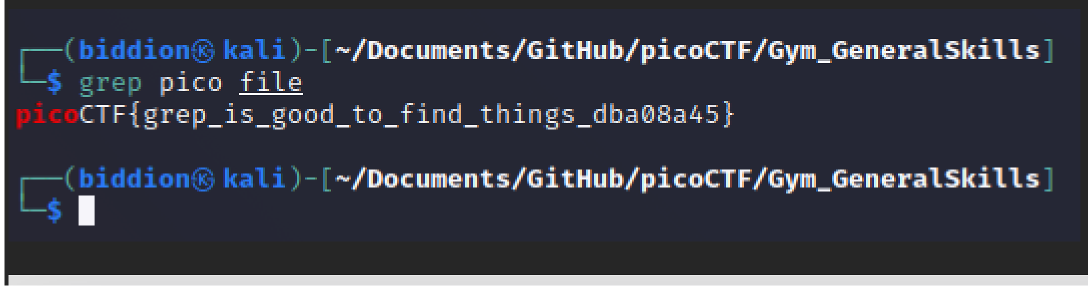
Can you find the flag in file? This would be really tedious to look through manually, something tells me there is a better way.

Hints

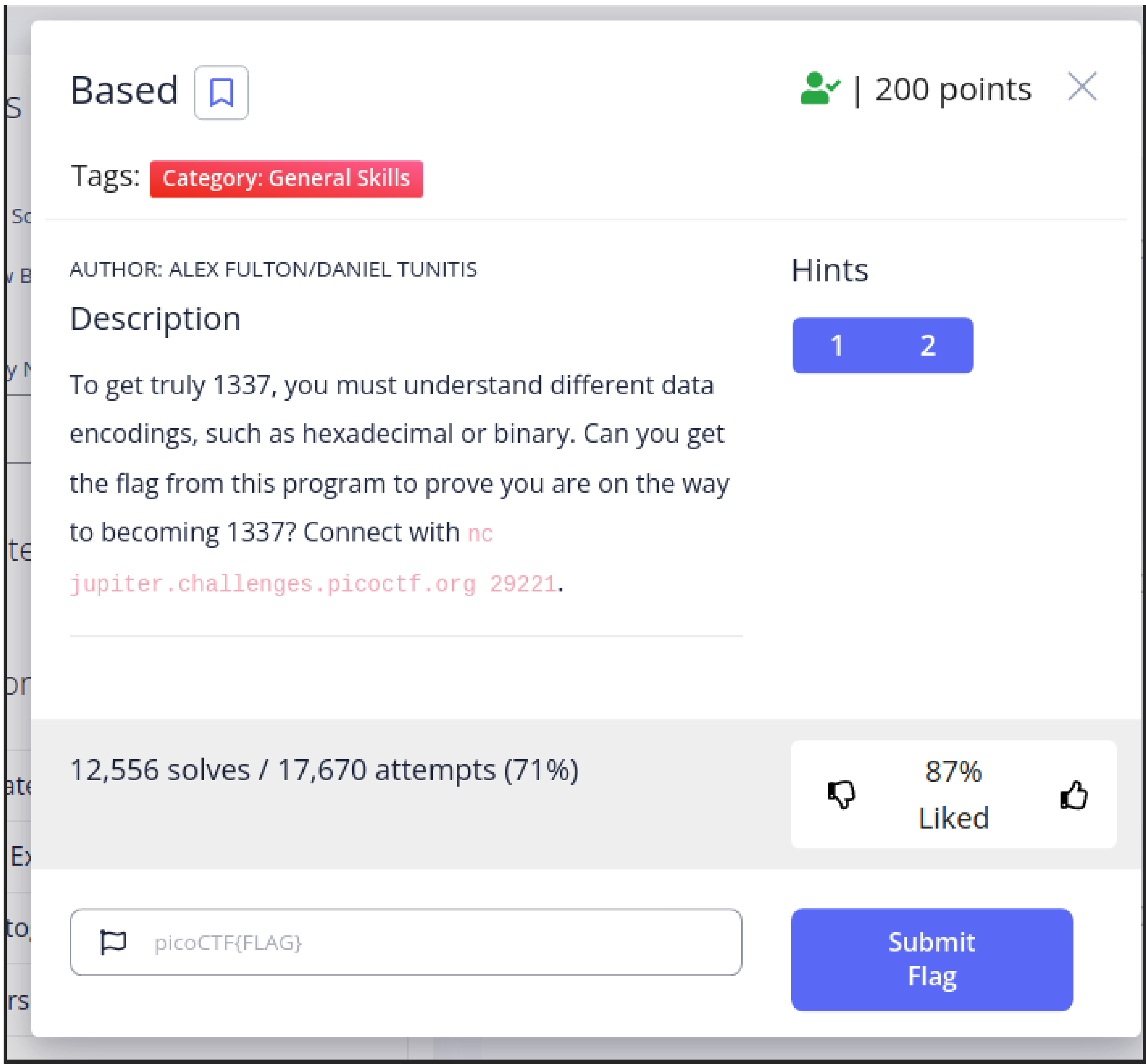
1

20,149 solves / 24,884 attempts (81%)

92% Liked



```
┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ grep pico file
picoCTF{grep_is_good_to_find_things_dba08a45}

┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ 
```



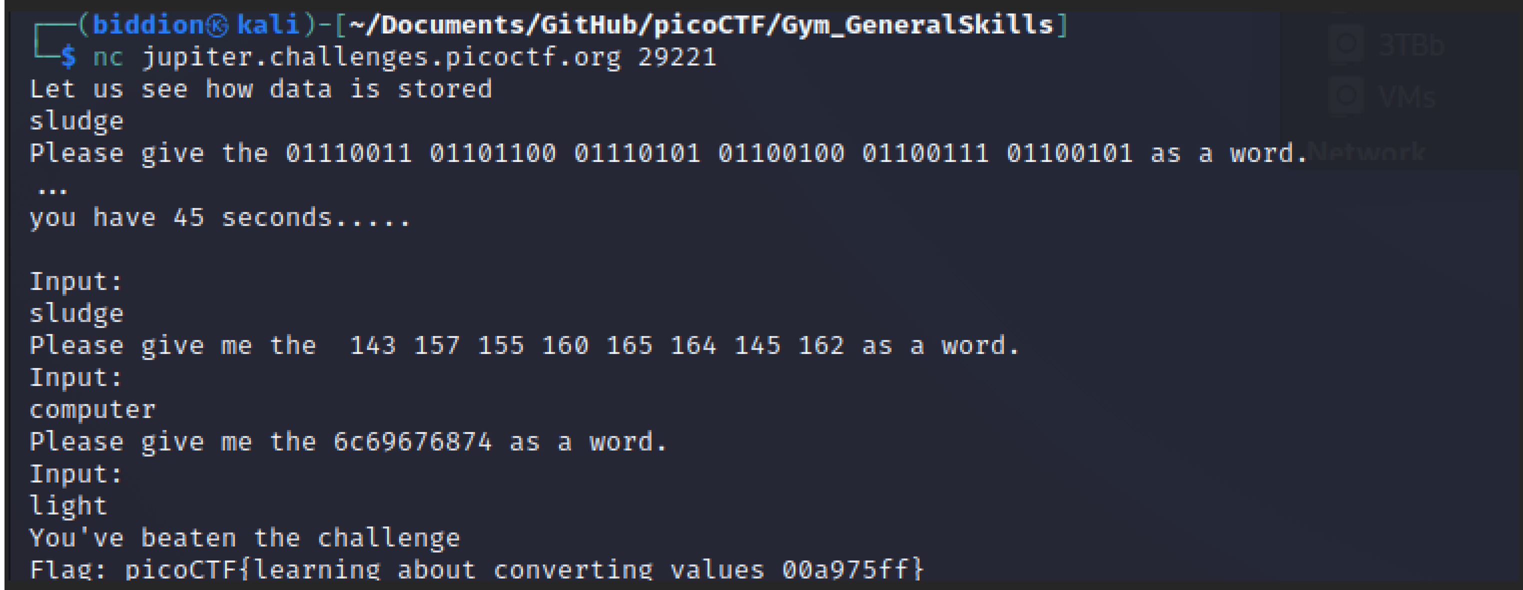
Based

Tags: Category: General Skills

AUTHOR: ALEX FULTON/DANIEL TUNITIS

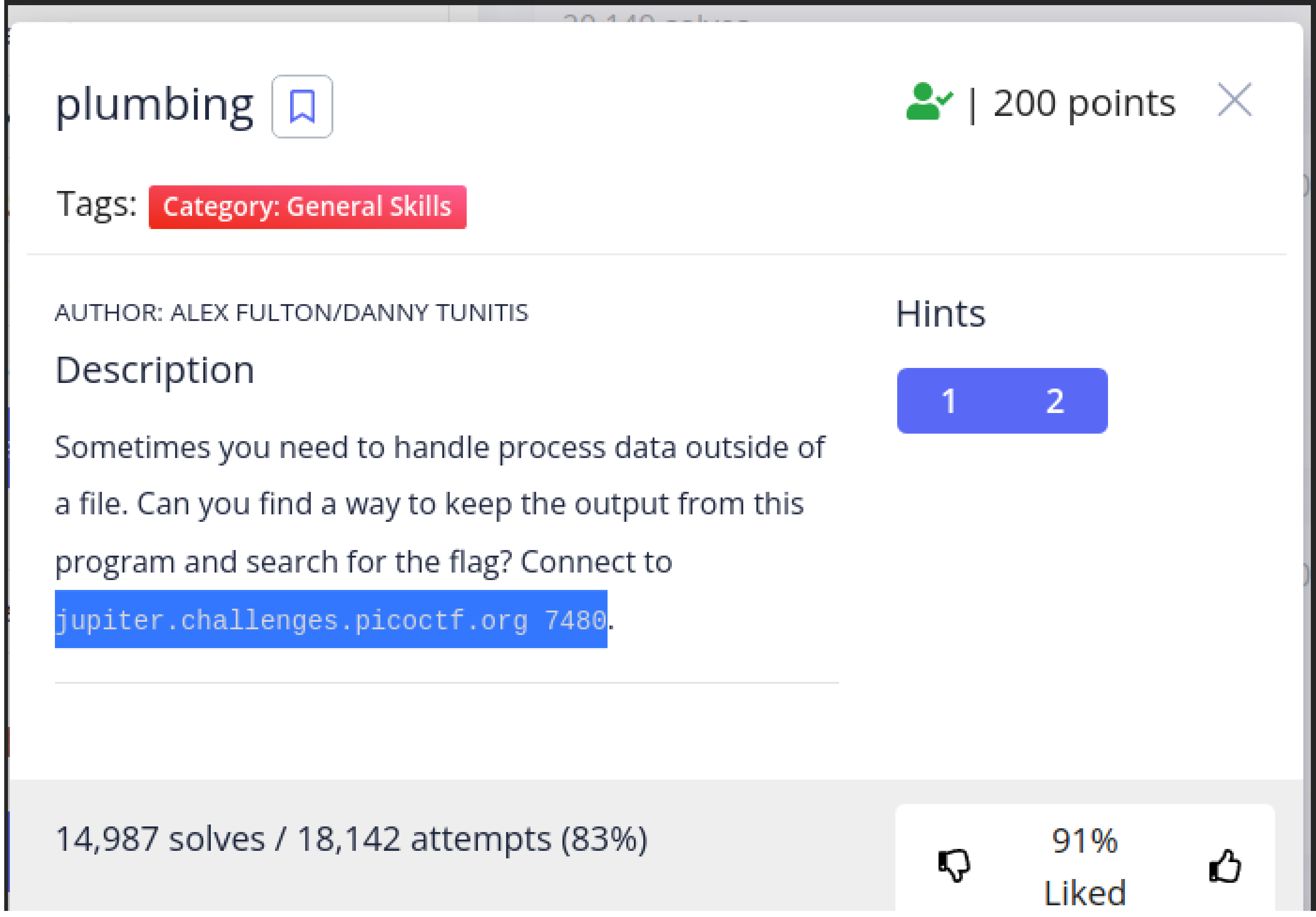
Description

To get truly 1337, you must understand different data encodings, such as hexadecimal or binary. Can you get the flag from this program to prove you are on the way to becoming 1337? Connect with `nc jupiter.challenges.picoctf.org 29221`.



```
┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ nc jupiter.challenges.picoctf.org 29221
Let us see how data is stored
sludge
Please give the 01110011 01101100 01110101 01100100 01100111 01100101 as a word.
...
you have 45 seconds.....

Input:
sludge
Please give me the  143 157 155 160 165 164 145 162 as a word.
Input:
computer
Please give me the 6c69676874 as a word.
Input:
light
You've beaten the challenge
Flag: picoCTF{learning about converting values 00a975ff}
```

I used cyberchef's magic recipe for these



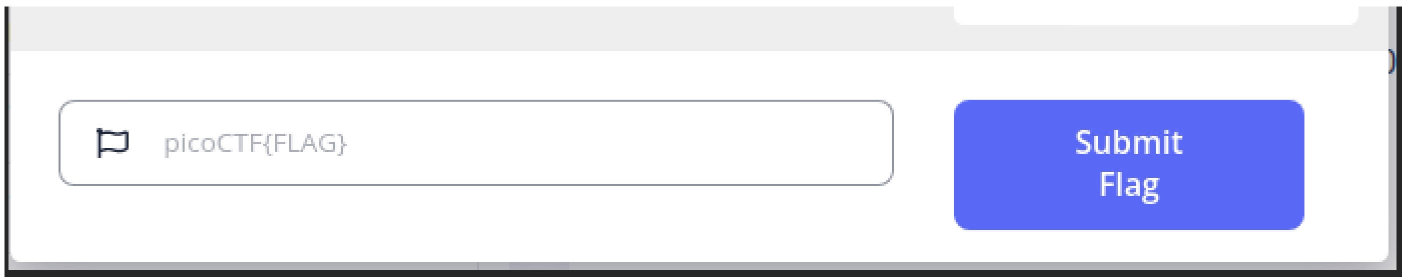
plumbing

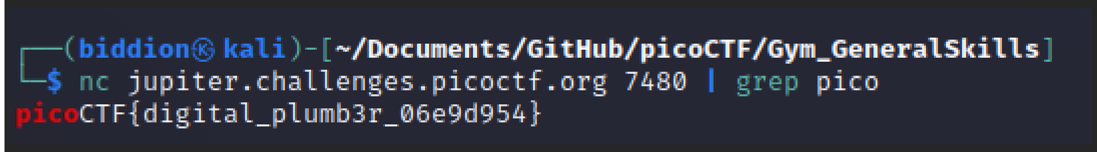
Tags: Category: General Skills

AUTHOR: ALEX FULTON/DANNY TUNITIS

Description

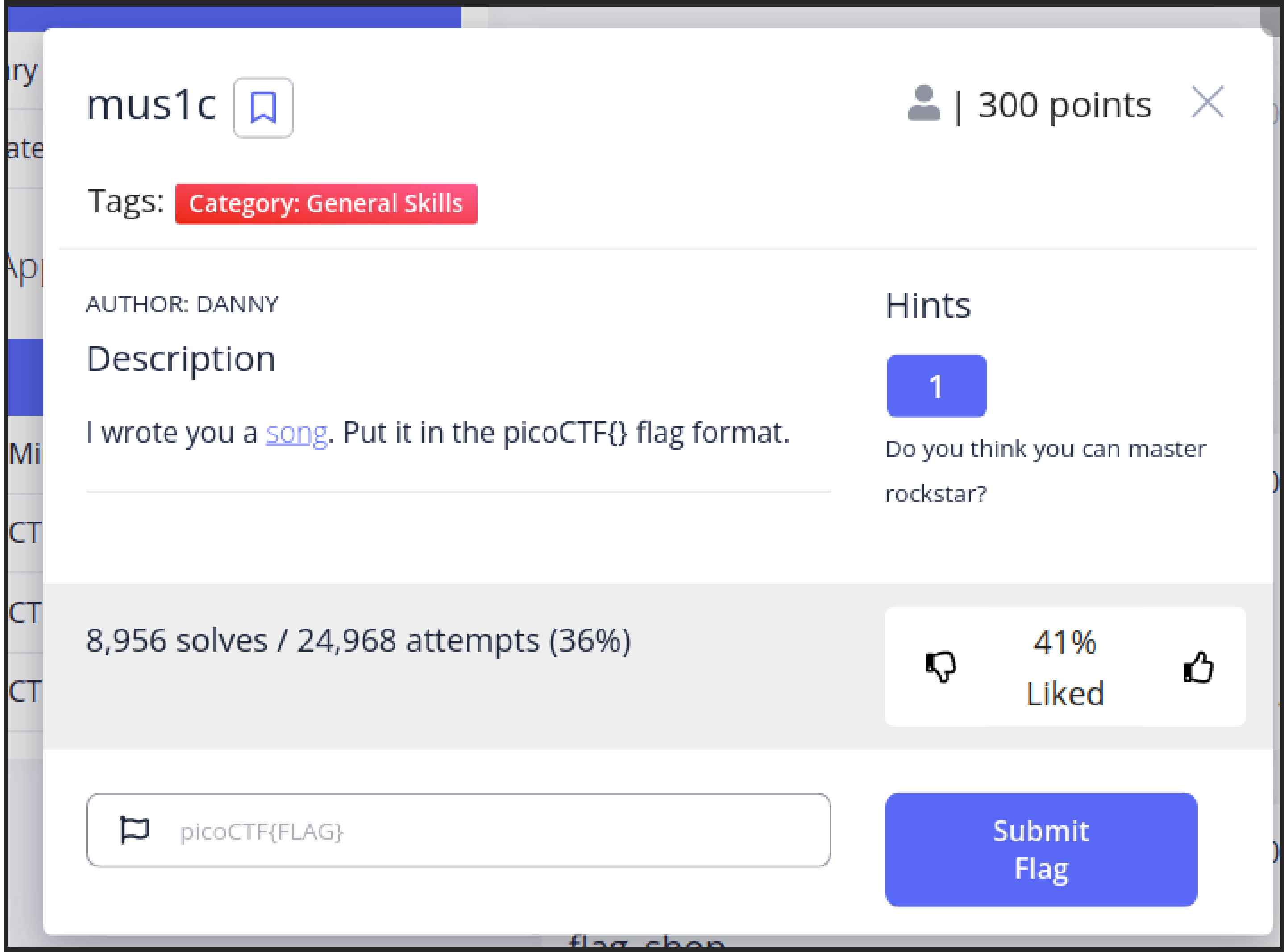
Sometimes you need to handle process data outside of a file. Can you find a way to keep the output from this program and search for the flag? Connect to `jupiter.challenges.picoctf.org 7480`.





```
┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ nc jupiter.challenges.picoctf.org 7480 | grep pico
picoCTF{digital_plumb3r_06e9d954}
```

nc jupiter.challenges.picoctf.org 7480 | grep pico



mus1c | 300 points

Tags: Category: General Skills

AUTHOR: DANNY

Description

I wrote you a song. Put it in the picoCTF{} flag format.

Hints

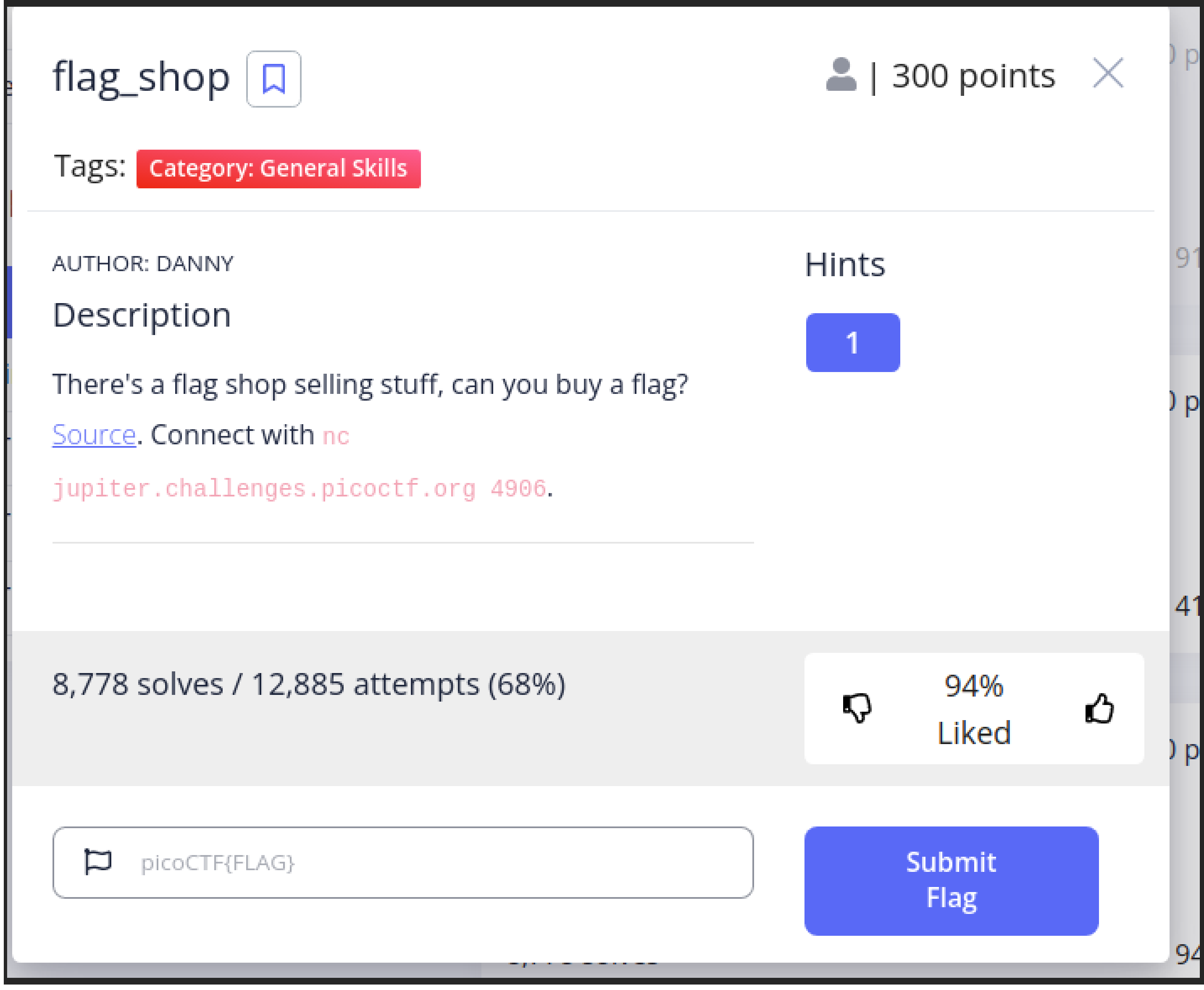
1

Do you think you can master rockstar?

8,956 solves / 24,968 attempts (36%)

41% Liked

I don't know



flag_shop | 300 points

Tags: Category: General Skills

AUTHOR: DANNY

Description

There's a flag shop selling stuff, can you buy a flag? Source. Connect with `nc jupiter.challenges.picoctf.org 4906`.

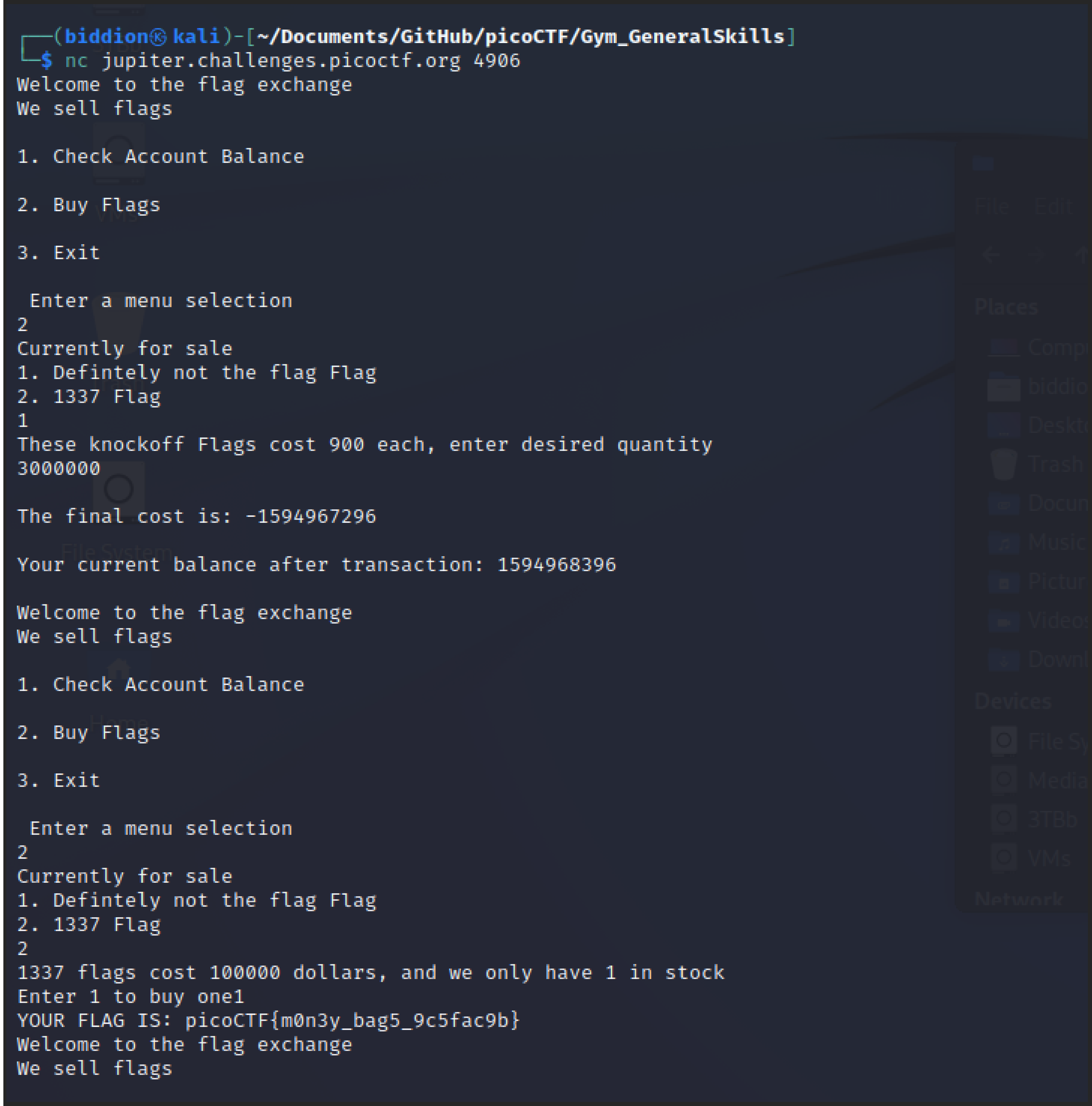
Hints

1

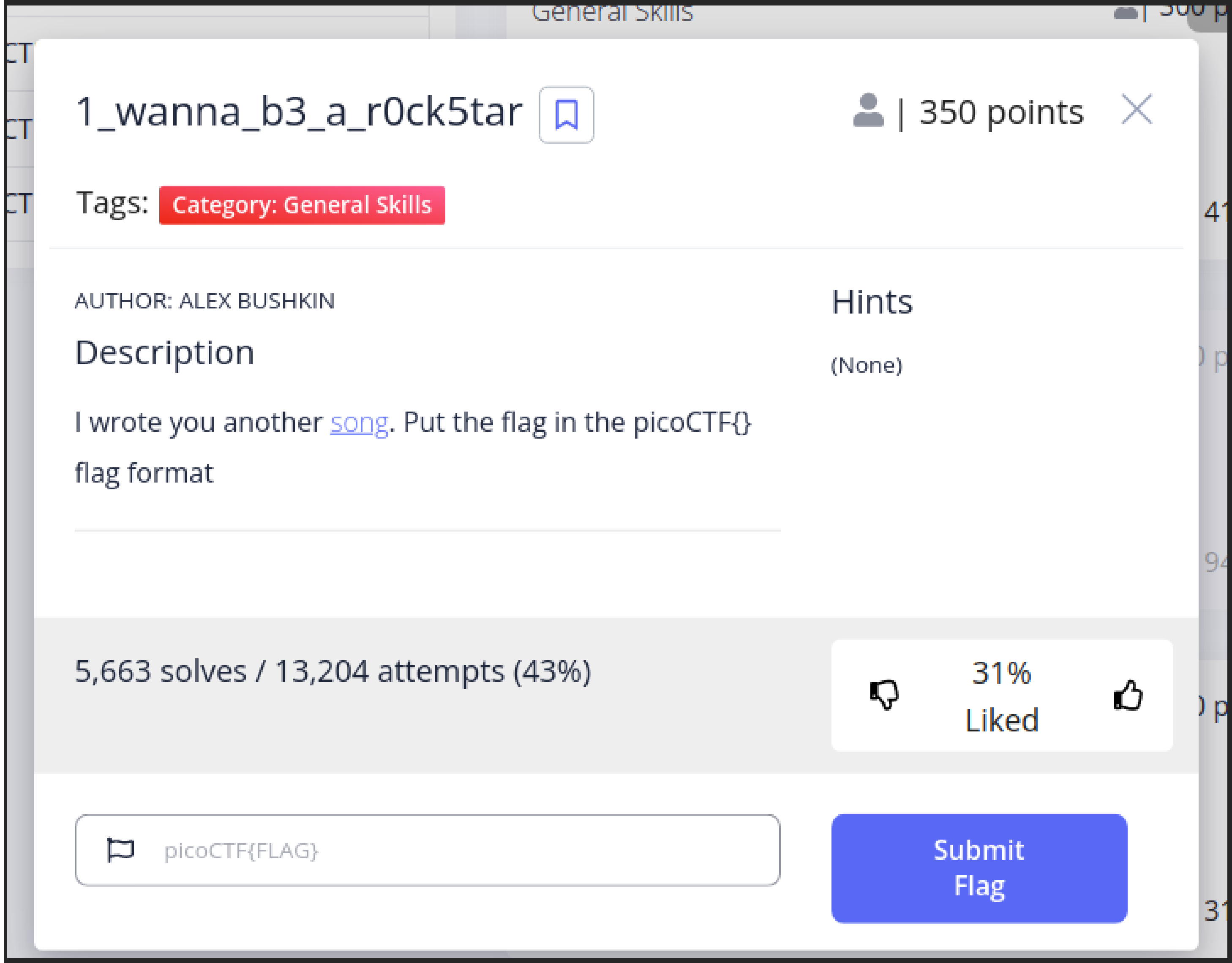
8,778 solves / 12,885 attempts (68%)

94% Liked

I cheated this one; I get the concepts but I would not be able to do this myself



```
┌──(biddion㉿kali)-[~/Documents/GitHub/picoCTF/Gym_GeneralSkills]
└─$ nc jupiter.challenges.picoctf.org 4906
Welcome to the flag exchange
We sell flags

1. Check Account Balance

2. Buy Flags

3. Exit

 Enter a menu selection
2
Currently for sale
1. Defintely not the flag Flag
2. 1337 Flag
1
These knockoff Flags cost 900 each, enter desired quantity
3000000

The final cost is: -1594967296

Your current balance after transaction: 1594968396

Welcome to the flag exchange
We sell flags

1. Check Account Balance

2. Buy Flags

3. Exit

 Enter a menu selection
2
Currently for sale
1. Defintely not the flag Flag
2. 1337 Flag
2
1337 flags cost 100000 dollars, and we only have 1 in stock
Enter 1 to buy one1
YOUR FLAG IS: picoCTF{m0n3y_bag5_9c5fac9b}
Welcome to the flag exchange
We sell flags
```



1_wanna_b3_a_r0ck5tar | 350 points

Tags: Category: General Skills

AUTHOR: ALEX BUSHKIN

Description

I wrote you another song. Put the flag in the picoCTF{} flag format

Hints

(None)

5,663 solves / 13,204 attempts (43%)

31% Liked

apparently there is a language called 'rockstar'; skip!