TSA Cybersecurity Mock Competition

Cryptography

frenchman

Hey, so uhhh... this French dude came into the building and was screaming something?

I think they said:

aidezmoi! Ils m'ont laissé dans un lycée américain!

I'm not sure; I don't speak French.

Anyway, they seemed stressed about this sheet of paper. Any idea?

The answer is of the format flag{answer}

Hint: I think the dude was mentioning something about "le chiffrage indéchiffrable"? Something about a V guy??

xor i'll do it

I thought **()** meant exponentiation D: How am I supposed to get the flag?

```
Flag ^ K1 ^ K2 ^ K3 ^ K4 = 02a6dfe98ae7dcbf96cf951b39488228c94297fb12c46096d8

K1 ^ K3 = e572345388e5dee89dd8c62be6326fe0a2360e29853fbd01d6

K2 ^ K3 = 352c61c7afe6400d5e5fb1cb0f331e5eb93aee14889371a8f6

K3 ^ K4 = b494eb1ad6832735272f87a4a82681e1b7221b992e51940b85
```

The answer is of the format flag{answer}.

i've got nothing here's some rsa

I don't have a funny quip to say here. I was gonna put like some super simple calculus but I also realize that not everyone has taken calculus yet... so...

Have fun!

```
p = 172264247183169894489153119451334259897
q = 214570086054419925362447458720950927091
e = 65537

c = 1821723370200066645588366051142376454249231561365317783558173520514583559350
```

What is the decoded value ??

Forensics

extensions

This is a really weird text file $\boxed{\text{TXT}}$? Can you find the flag?

This question is from picoCTF. PicoCTF flags are of the format: picoCTF answer].

Hint: How do operating systems know what kind of file it is? (It's not just the ending!

Glory of the Garden

This garden contains more than it seems.

This question is from picoCTF. PicoCTF flags are of the format: picoCTF{answer}

Hint: What is a hex editor?

like1000

This .tar file got tarred a lot.

This question is from picoCTF. PicoCTF flags are of the format: picoCTF {answer}

Hint: Try and script this, it'll save you a lot of time

What Lies Within

There's something in the building. Can you retrieve the flag?

This question is from picoCTF. PicoCTF flags are of the format: picoCTF {answer}

Hint: There is data encoded somewhere... there might be an online decoder.

WhitePages

I stopped using YellowPages and moved onto WhitePages... but the page they gave me is all blank!

This question is from picoCTF. PicoCTF flags are of the format: picoCTF answer].

Reverse Engineering

Cupid Shuffle

wwwwiiiieeee```````hhhhaaaa[[[[oooo____ddddkkkkkkkhhhh[[[[rrrreeee^^^^hhhhh]]]]ccc
d! I'm having so much fun!

```
import java.util.*;

public class CupidShuffle {
    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
        String input = scanner.next();

        input = toTheRight(input);
        input = toTheRight(input);
        input = toTheRight(input);
        input = toTheRight(input);
        input = toTheLeft(input);
        input = toTheLeft(input);
        input = toTheLeft(input);
        input = toTheLeft(input);
        input = kick(input);
        input =
```

```
input = kick(input);
        input = kick(input);
        input = walkItByYourself(input);
        input = walkItByYourself(input);
        letMeSeeYouDo(input);
    public static String toTheRight(String input) {
        int len = input.length();
        return input.substring(len - 1, len) + input.substring(1, len - 1);
    }
    public static String toTheLeft(String input) {
        return input.substring(1, input.length()) + input.substring(0, 1);
    }
    public static String kick(String input) {
        String result = "";
        for (int i = 0; i < input.length(); i++) {</pre>
            char nc = (char) (input.charAt(i) - 1);
            result += nc;
        return result;
    public static String walkItByYourself(String input) {
        String result = "";
        for (int i = 0; i < input.length(); i++) {</pre>
            result += input.charAt(i);
            result += input.charAt(i);
        return result;
    public static void letMeSeeYouDo(String input) {
        System.out.println(input);
}
```

The answer is of the format flag{answer}.

vault-door-4

This vault uses ASCII encoding for the password. The source code for this vault is here: <u>VaultDoor4.java</u>

This question is from picoCTF. PicoCTF flags are of the format: picoCTF{answer}. Also, the vault doors before this one were boring.

Hint: Use a search engine to find an "ASCII table".

Hint: You will also need to know the difference between octal, decimal, and hexadecimal numbers.

whython

I put in a flag and I got out

```
|fmhcmdgdqolnb^dgs^rdqdgv^sta^mnhrmdgdqol_n_b_^_`_^_c_d_k_k_`_b_^_r_s_h_z_f_`_k_e
```

???

What does this code even do?

```
'_'.join(sorted(chr(ord(c)-1))[0] for c in list(reversed(flag))).replace("_", "", 40)
```

Web Security

Cookies

Who doesn't love cookies? Try to figure out the best one. http://mercury.picoctf.net:6418/

This question is from picoCTF. PicoCTF flags are of the format: picoCTF(answer).

Irish-Name-Repo 1

There is a website running at https://jupiter.challenges.picoctf.org:33850/. Do you think you can log us in? Try to see if you can login!

This question is from picoCTF. PicoCTF flags are of the format: picoCTF{answer}

Hint: There doesn't seem to be many ways to interact with this. I wonder if the users are kept in a database?

Hint: Try to think about how the website verifies your login.

JaWT Scratchpad

Check the admin scratchpad! https://jupiter.challenges.picoctf.org/problem/63090/ or https://jupiter.challenges.picoctf.org:63090/ or

This question is from picoCTF. PicoCTF flags are of the format: picoCTF {answer}.

Hint: What is that cookie?

Hint: Have you heard of JWT?

where are the robots

Can you find the robots? https://jupiter.challenges.picoctf.org/problem/36474/ (link) or https://jupiter.challenges.picoctf.org:36474

This question is from picoCTF. PicoCTF flags are of the format: picoCTF {answer}.

Hint: What part of the website could tell you where the creator doesn't want you to look?