

hgame第一周wp

好康的流量

关注 奇安信技术研究院 公众号，发送 HelloHGAME2022 ，即可得到flag



Easy RSA

题目给的加密算法，很显然是RSA加密（但RSA中e的取值是在 $(p-1)*(q-1)$ 的范围内）

注释部分是flag中每个字母加密之后的形式

```
1 from math import gcd
2 from random import randint
3 from gmpy2 import next_prime
4 from Crypto.Util.number import getPrime
5 from secret import flag
6
7 def encrypt(c):
8     p = getPrime(8)
9     q = getPrime(8)
10    e = randint(0, p * q)
11    while gcd(e, (p - 1) * (q - 1)) != 1:
12        e = int(next_prime(e))
```

```

13     return e, p, q, pow(ord(c), e, p * q)
14
15 if __name__ == '__main__':
16     print(list(map(encrypt, flag)))
17     # [(12433, 149, 197, 104), (8147, 131, 167, 6633), (10687, 211, 197, 35594),
      (19681, 131, 211, 15710), (33577, 251, 211, 38798), (30241, 157, 251, 35973), (293,
      211, 157, 31548), (26459, 179, 149, 4778), (27479, 149, 223, 32728), (9029, 223,
      137, 20696), (4649, 149, 151, 13418), (11783, 223, 251, 14239), (13537, 179, 137,
      11702), (3835, 167, 139, 20051), (30983, 149, 227, 23928), (17581, 157, 131, 5855),
      (35381, 223, 179, 37774), (2357, 151, 223, 1849), (22649, 211, 229, 7348), (1151,
      179, 223, 17982), (8431, 251, 163, 30226), (38501, 193, 211, 30559), (14549, 211,
      151, 21143), (24781, 239, 241, 45604), (8051, 179, 131, 7994), (863, 181, 131,
      11493), (1117, 239, 157, 12579), (7561, 149, 199, 8960), (19813, 239, 229, 53463),
      (4943, 131, 157, 14606), (29077, 191, 181, 33446), (18583, 211, 163, 31800), (30643,
      173, 191, 27293), (11617, 223, 251, 13448), (19051, 191, 151, 21676), (18367, 179,
      157, 14139), (18861, 149, 191, 5139), (9581, 211, 193, 25595)]
18

```

其中 **e**代表公钥对应列表元素中小括号的第一个数字，**小括号中的第二位和第三位分别对应两个质数**，**小括号的第四位数字表示明文通过RSA加密后的密文**

根据RSA算法的特性，先要计算出密钥，通过密钥解出密文

```

1  flag_l=[(12433, 149, 197, 104), (8147, 131, 167, 6633), (10687, 211, 197, 35594),
      (19681, 131, 211, 15710), (33577, 251, 211, 38798), (30241, 157, 251, 35973), (293,
      211, 157, 31548), (26459, 179, 149, 4778), (27479, 149, 223, 32728), (9029, 223, 137,
      20696), (4649, 149, 151, 13418), (11783, 223, 251, 14239), (13537, 179, 137, 11702),
      (3835, 167, 139, 20051), (30983, 149, 227, 23928), (17581, 157, 131, 5855), (35381,
      223, 179, 37774), (2357, 151, 223, 1849), (22649, 211, 229, 7348), (1151, 179, 223,
      17982), (8431, 251, 163, 30226), (38501, 193, 211, 30559), (14549, 211, 151, 21143),
      (24781, 239, 241, 45604), (8051, 179, 131, 7994), (863, 181, 131, 11493), (1117, 239,
      157, 12579), (7561, 149, 199, 8960), (19813, 239, 229, 53463), (4943, 131, 157,
      14606), (29077, 191, 181, 33446), (18583, 211, 163, 31800), (30643, 173, 191, 27293),
      (11617, 223, 251, 13448), (19051, 191, 151, 21676), (18367, 179, 157, 14139), (18861,
      149, 191, 5139), (9581, 211, 193, 25595)]
2  for index,value in enumerate(flag_l):
3      e,p,q,m_data=value
4      # print(e,p,q,m_data)
5      for i in range(2,p*q):
6          if (i*e)%((p-1)*(q-1))==1:      #找出密钥i的值
7              print(chr(pow(m_data,i,p*q)),end='') #通过密钥解出明文，之后转换为字符输出
8              break

```

运行程序得到flag

```
E:\anaconda\python.exe G:/pycharm/CTF/crypto2.py
hgame{L00ks_l1ke_y0u've_mastered_RS4!}
Process finished with exit code 0
```

蛛蛛...嘿嘿♥我的蛛蛛

思路：该题就是找到该页面的隐藏链接跳转下一个页面，直到最后页面，通过抓最后页面的包，发现在响应头中存在flag

你现在在第1关

红豆泥私密马赛，我忘记我把flag丢在哪一关了，下面有个按钮让你前往下一个，慢慢找叭~XD

点我试试

查看页面源码

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>猜猜我在哪</title>
7   <style type="text/css">
8     body {
9       text-align: center;
10    }
11    a {
12      background-color: #5496ce; /* 是Vidar蓝! */
13      border: none;
14      color: white;
15      padding: 15px 32px;
16      text-align: center;
17      text-decoration: none;
18      display: inline-block;
19      font-size: 16px;
20    }
21  </style>
22 </head>
23 <body>
24   <h1>你现在在第1关</h1>
25   <p>红豆泥私密马赛，我忘记我把flag丢在哪一关了，下面有个按钮让你前往下一个，慢慢找叭~XD</p>
26   <a href="?key=GB0BGCppTWUij%2F6HnBM4Indik6pYx04q3buSm2FhITI1LgQHbfcHcQ35fSLqlqmSFKCSsTm8fpkUVOP5zuCnw%3D%3D">点我试试</a>
27 </body>
28 </html>
29
```

发现下一页面的url是在初始的 url: <https://hgame-spider.vidar.club/17220d9bbc> 的基础上加上 当前页面源码的href值

使用爬虫爬取href的值，进行一个for循环，不断跳转到下一个页面，直到href值为空

```

1 import re
2 import requests
3
4 headers={
5     "User-Agent": "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36
6     (KHTML, like Gecko) Chrome/97.0.4692.71 Safari/537.36"
7 }
8 url1="https://hgame-spider.vidar.club/17220d9bbc"
9 url2=""
10 for i in range(1000):
11     url=url1+url2
12     resp = requests.get(url, headers=headers)
13     # print(resp.text)
14     obj = re.compile(r'("(?P<id>\?key=.*?)">', re.S)
15     it = obj.search(resp.text)
16     # print(it.group("id"))
17     url2=it.group("id")
18     print("第%d次的url:%s" % (i+1,url))
19
20 # 找到了最后一个跳转的url之后使用burp进行抓包flag就在响应头中

```

执行代码后的结果：

```

第94次的url:https://hgame-spider.vidar.club/17220d9bbc?key=6B086CpTWUj3%2F6HnBM41ndik6pYx04q3buSm2FhTTJMAVvinnp6HUG80qjb0wgtknk5nx0r4%2Bq4DJsgqEEVpA%3D%3D
第95次的url:https://hgame-spider.vidar.club/17220d9bbc?key=6B086CpTWUj3%2F6HnBM41ndik6pYx04q3buSm2FhTTK820eah8I2Yf7C9dxFK8Ux0mPRVnYgknuChmQYp1m0I0%3D%3D
第96次的url:https://hgame-spider.vidar.club/17220d9bbc?key=6B086CpTWUj3%2F6HnBM41ndik6pYx04q3buSm2FhTTT3j0n3kQLSHhLaYf2NcF2dzVY0qHL3VjyMdnVmQw1kIKQ%3D%3D
第97次的url:https://hgame-spider.vidar.club/17220d9bbc?key=6B086CpTWUj3%2F6HnBM41ndik6pYx04q3buSm2FhTTIyJ21YVJfXw1%2B8B4WiyW9hayfkZkXPpg9ZntoPclw5Q%3D%3D
第98次的url:https://hgame-spider.vidar.club/17220d9bbc?key=6B086CpTWUj3%2F6HnBM41ndik6pYx04q3buSm2FhTTI9t6YooMvCRdqfXl%2B8xr7KBR34rW073QbLIN807XR3iq%3D%3D
第99次的url:https://hgame-spider.vidar.club/17220d9bbc?key=6B086CpTWUj3%2F6HnBM41ndik6pYx04q3buSm2FhTTTianj8Q4jn3cRdqRsRoLDP7UkL3CbHptw8%2BWoT5mpncHQ%3D%3D
第100次的url:https://hgame-spider.vidar.club/17220d9bbc?key=6B086CpTWUj3%2F6HnBM41ndik6pYx04q3buSm2FhTTLt8y5T%2FXCAojw4%2FzqCZxebS0%2FKHKWviyfqe5ivtfcyMQ%3D%3D
Traceback (most recent call last):
  File "G:/pycharm/CTF/web-2.py", line 19, in <module>
    AttributeError: 'NoneType' object has no attribute 'group'

```

找到最后一次url，使用burp进行抓包得到flag

Send

Cancel

<

>

Request

Pretty

Raw

Actions

```

1 GET /17220d9bbc?key=
6B086CpTWUj3%2F6HnBM41ndik6pYx04q3buSm2FhTTIn6QC27e657bbu8P12S%2F7e1wJWJ2BWTJsyEKMPg5t5mf0%3D%3D HTTP/1.1
2 Host: hgame-spider.vidar.club
3 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64; rv:96.0) Gecko/20100101 Firefox/96.0
4 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8
5 Accept-Language: zh-CN,zh;q=0.8,zh-TW;q=0.7,zh-HK;q=0.5,en-US;q=0.3,en;q=0.2
6 Accept-Encoding: gzip, deflate
7 Connection: close
8 Upgrade-Insecure-Requests: 1
9 Sec-Fetch-Dest: document
10 Sec-Fetch-Mode: navigate
11 Sec-Fetch-Site: none
12 Sec-Fetch-User: ?1
13
14

```

Response

Pretty

Raw

Render

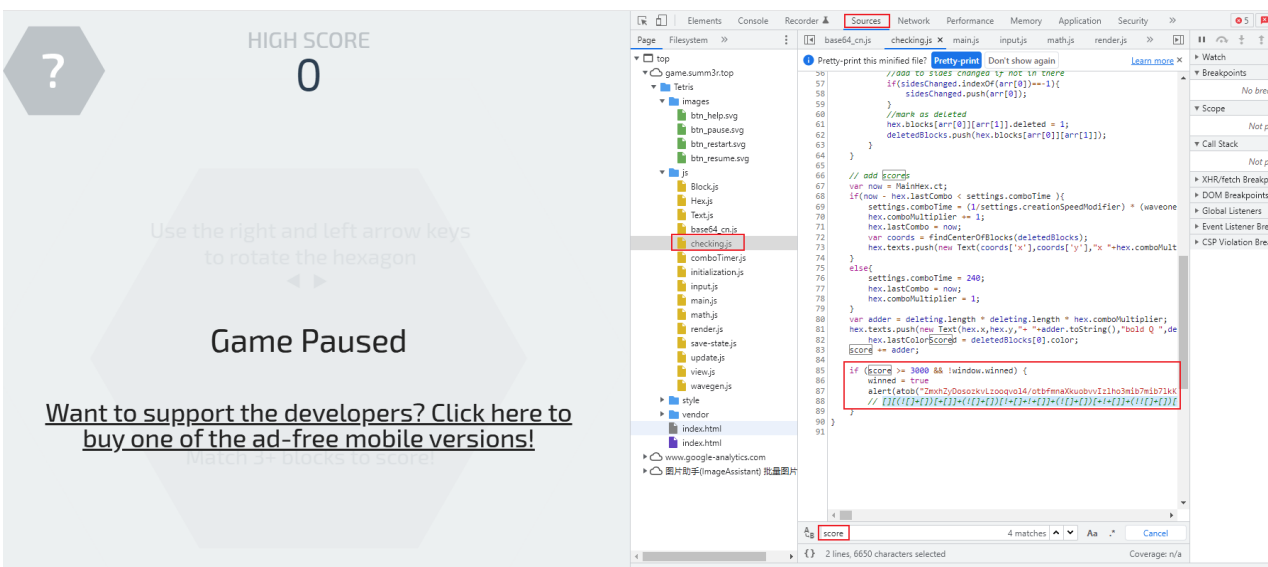
Actions

```

1 HTTP/1.1 200 OK
2 Content-Type: text/html; charset=utf-8
3 Content-Length: 831
4 Connection: close
5 X-API-RequestId: 3d1f20b2ec1fa9302fec41187a85129
6 X-API-ID: api-6p0hmf8t
7 Auth0r: asjdf
8 Fi4g: hgame[b655e86d61e57630d9c9f2495b633798405b232b073b8ccaa7b83217d4600f97f]
9 Welcome-To-Hgame: See you next week!
10 X-Request-Id: 33a45f8e-7c63-4984-bd01-d312c8abb90b
11 Date: Sat, 22 Jan 2022 01:26:09 GMT
12 X-API-FuncName: helloworld-1642513741
13 X-API-AppId: 1308188104
14 X-API-ServiceId: service-kjbkayp
15 X-API-HttpHost: nil
16 X-API-Status: 200
17 X-API-UpstreamStatus: 200
18
19 <!DOCTYPE html>
20

```

思路：不需要抓包，好像这个游戏是只靠html+js+css代码组成，靠js来实现动态的游戏效果，要不你打到3000分，网页会发送flag，或则你按F12，查看js代码，寻找score



找到了发送flag的代码

根据注释提示得到

$$[[[(![]+[])][+]]+(!![]+[])![!+][!+][!+]+(!![]+[])![!+][!+][!+]+(!![]+[])!$$
[illegible]

[illegible]

1 | 使用alert()函数就可以实现弹窗得到flag



