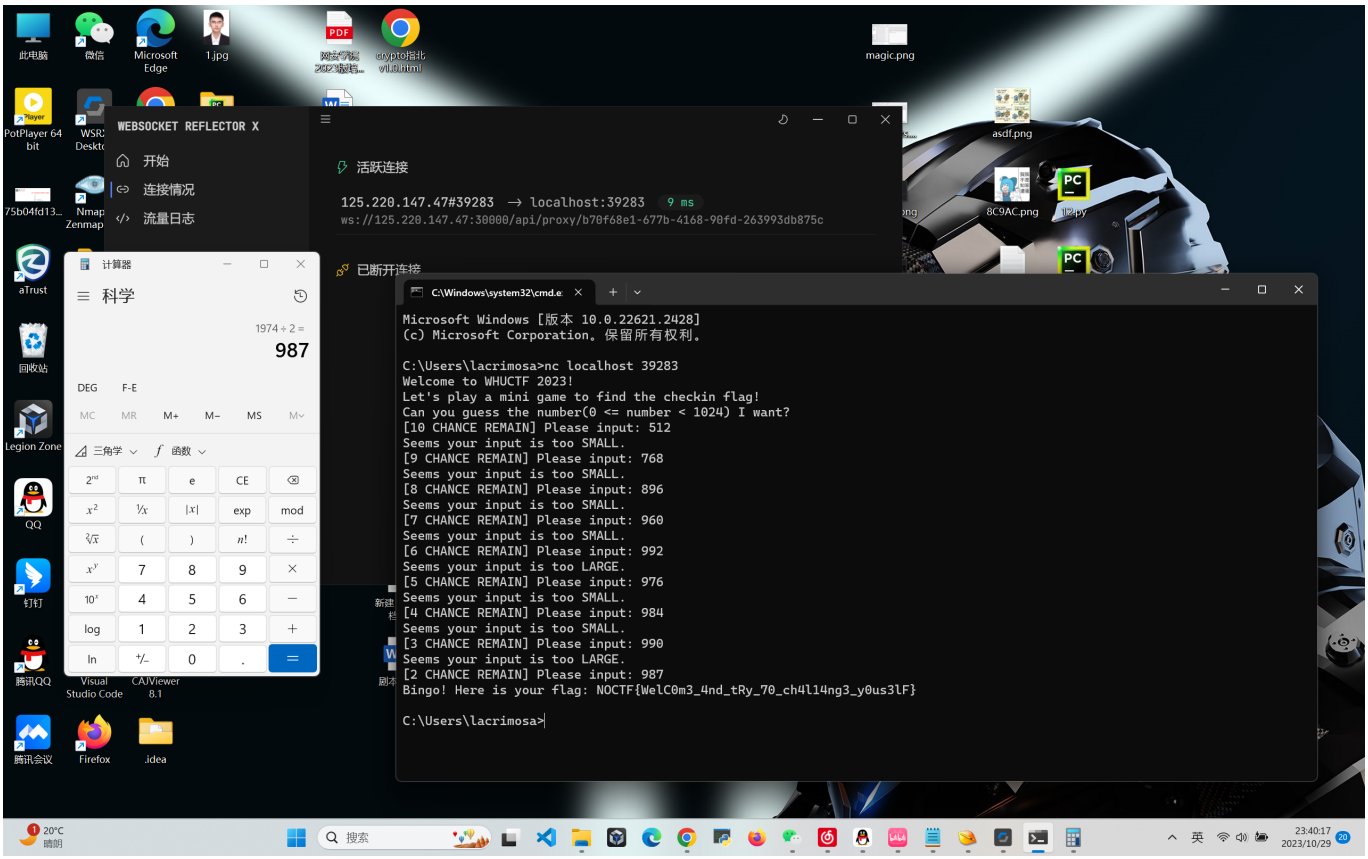
Write up

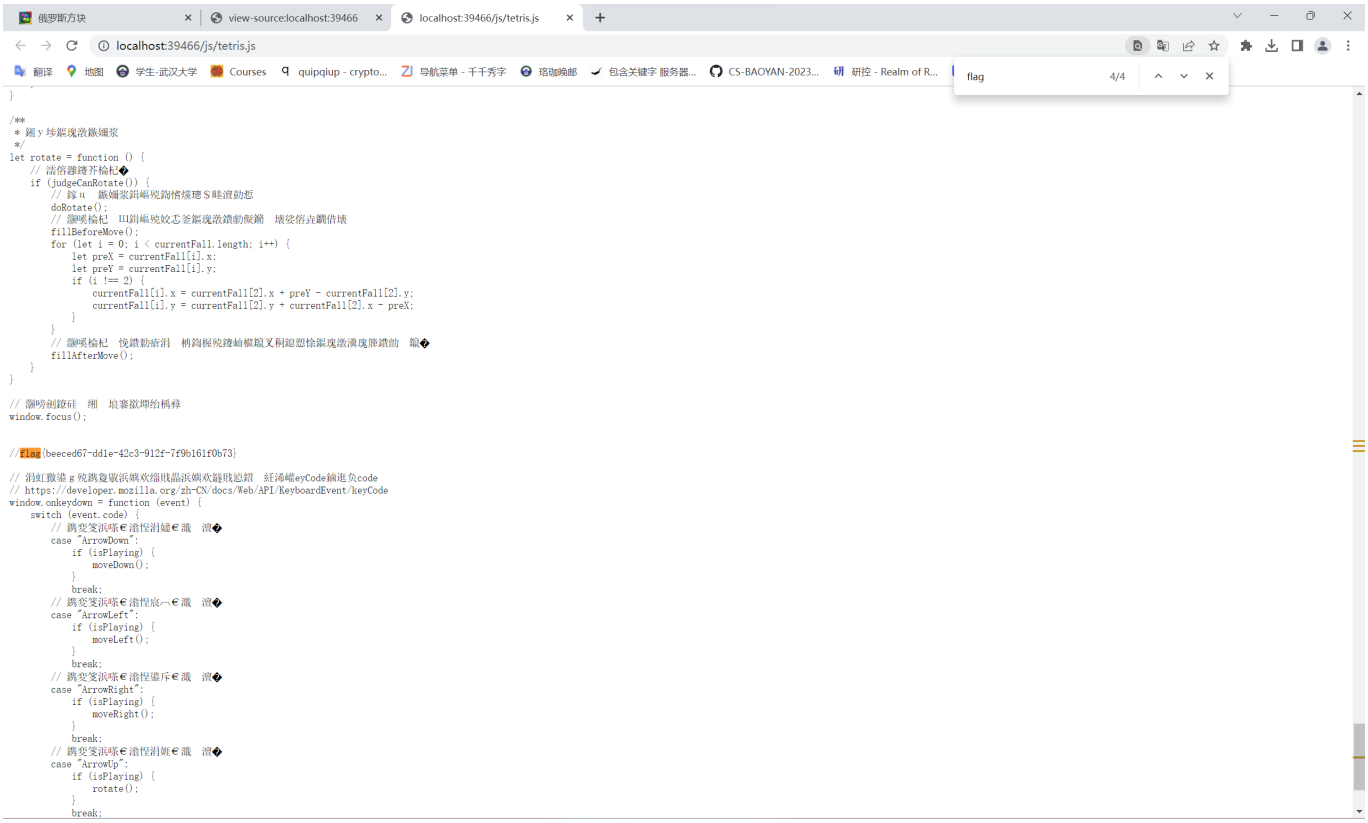
signin

nc连接后提示猜数字，通过二分交互得到flag。



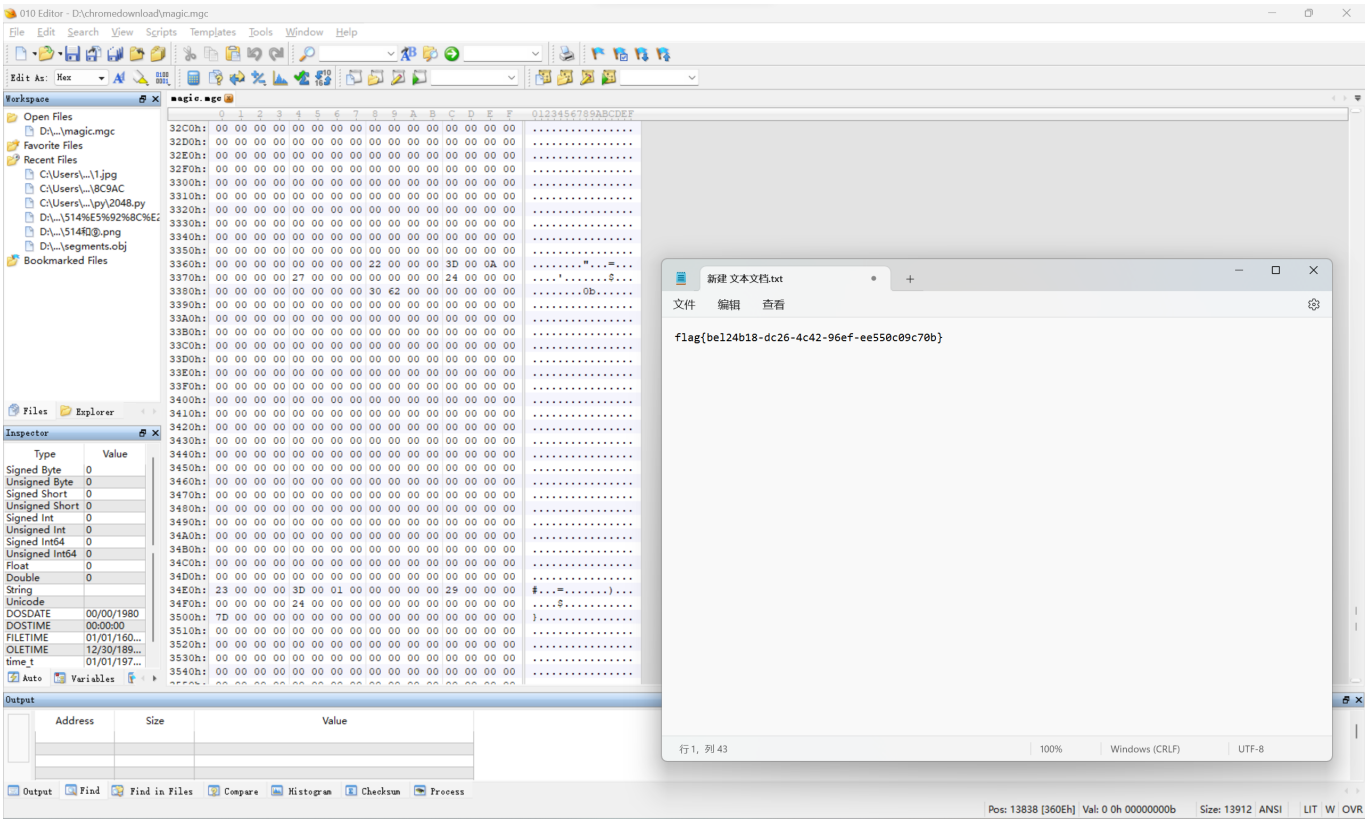
Tetris (checkin)

打开网页代码，进入js文本页面搜索flag即可。



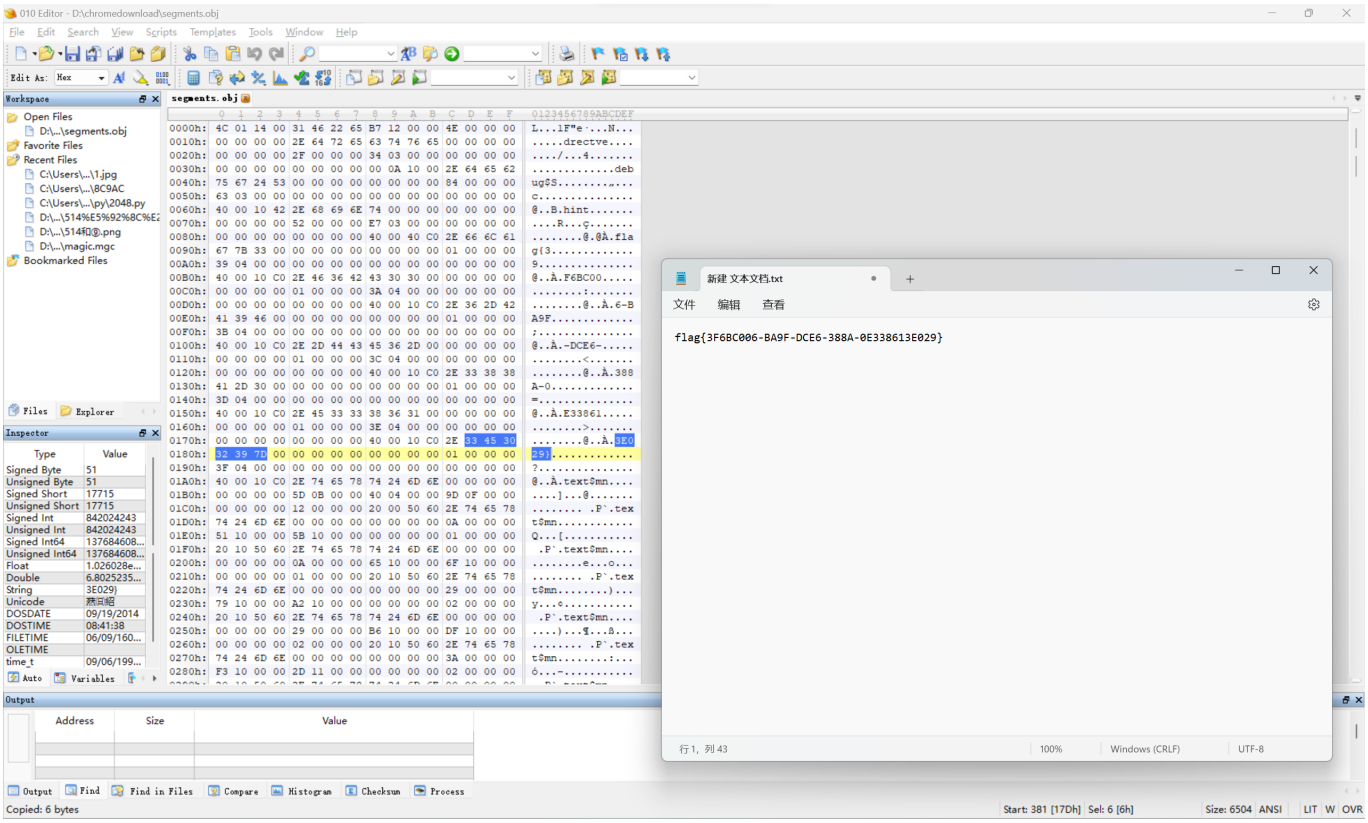
magic

用010editor打开题中的magic.mgc文件，从中可直接提取flag。(感觉不是正解)



segments

同样用010editor打开题中的segments.obj文件，从中可直接提取flag。(感觉也不是正解)

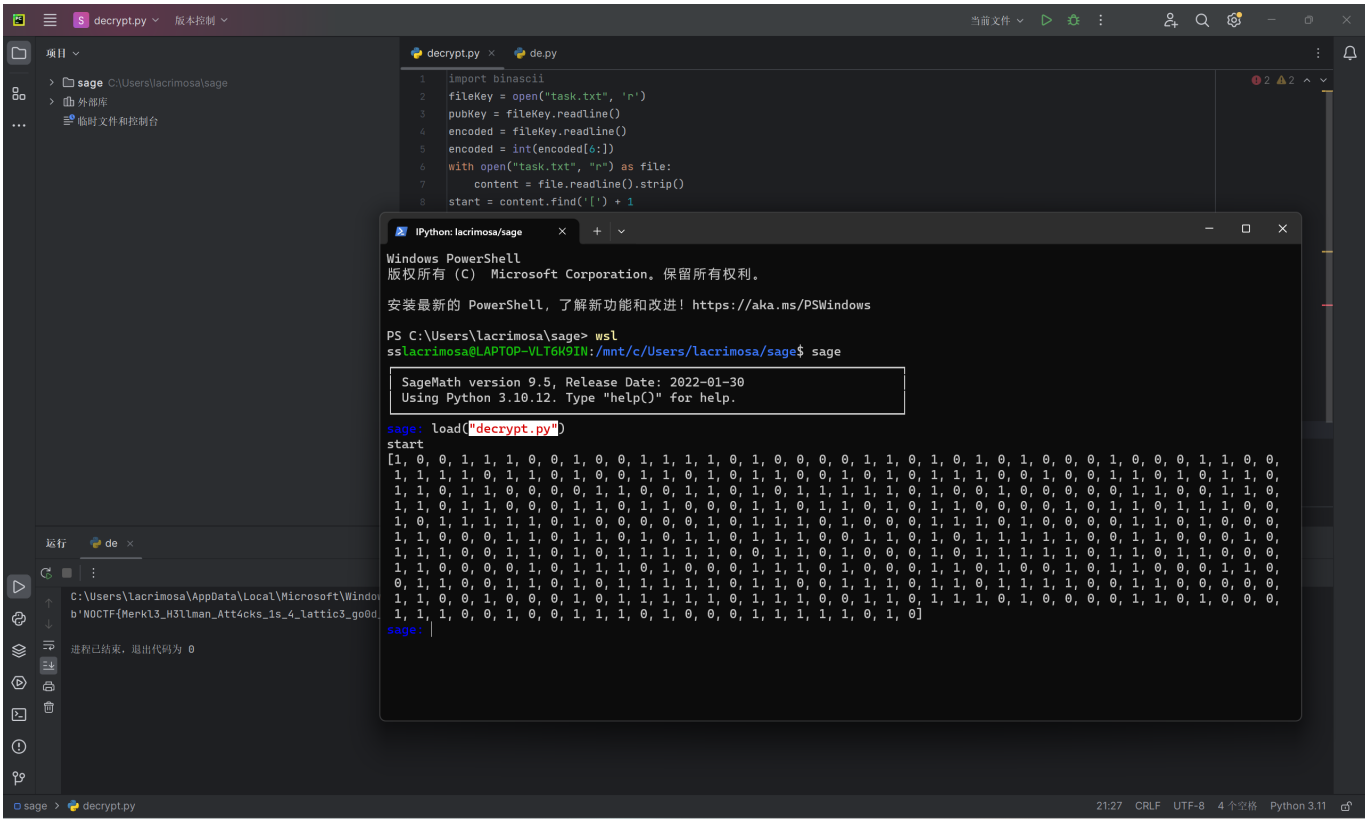


lattice

观察加密代码，发现是超递增的背包加密，考虑采用LLL攻击，这里采用sagemath自带的LLL，代码如下：

```
fileKey = open("task.txt", 'r')
pubKey = fileKey.readline()
encoded = fileKey.readline()
encoded = int(encoded[6:])
with open("task.txt", "r") as file:
    content = file.readline().strip()
start = content.find('[') + 1
end = content.find(']')
pubKey_str = content[start:end]
pubKey = [int(x) for x in pubKey_str.split(',')]
nbit = len(pubKey)
print("start")
A = Matrix(ZZ, nbit + 1, nbit + 1)
for i in range(nbit):
    A[i, i] = 1
for i in range(nbit):
    A[i, nbit] = pubKey[i]
A[nbit, nbit] = -int(encoded)
res = A.LLL()
print(res.row(423).list())
```

运行得到



去除输出中的括号和逗号，并去除最后一位，得到一个二进制数，转成byte后即可得到flag。