攻防世界crypto新手练习区通关教程

原创

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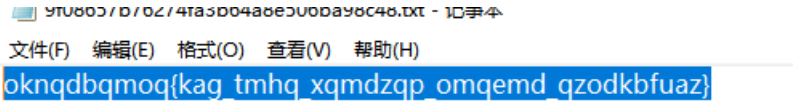
base64

下载附件后去解密base64即可

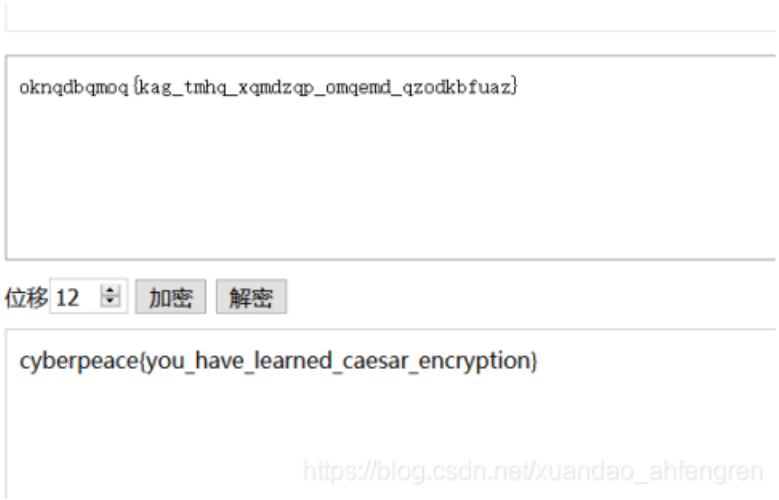
cyberpeace{Welcome_to_new_World!}

Caesar

下载附件后去解密，是凯撒密码



位移12即可



Morse

这是一串摩斯密码，拿去解密即可

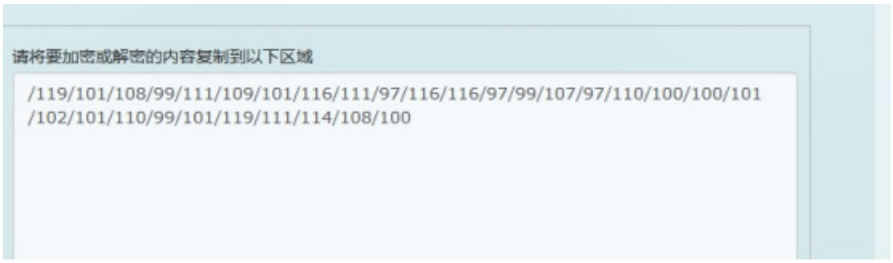
cyberpeace{morsecodeissointeresting}

混合编码

首先base64解密

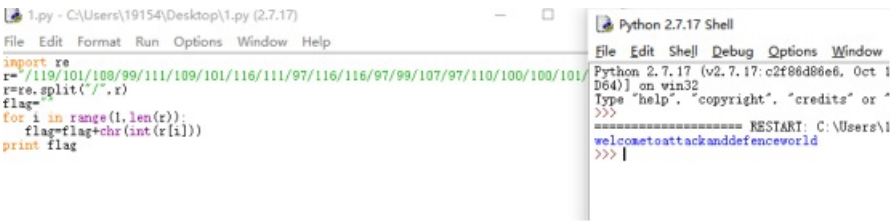
然后进行unicode编码转换

接着再进行一次base64解密



最后在ascii解密

```
import re
r="/119/101/108/99/111/109/101/116/111/97/116/116/97/99/107/97/110/100/100/101/102/101/110/99/101/119/111/1
r=re.split("/",r)
flag=""
for i in range(1,len(r)):
   flag=flag+chr(int(r[i]))
print flag
```



加上格式Cyberpeace{welcometoattackanddefenceworld}

幂数加密

运行脚本进行解密即可

```
a=["88421","0122","048","02244","04","0142242","0248","0122"]
flag="" for j in range(0,len(a)):
    str = a[j]
    list=[]
    sum=0
    for i in str:
        list.append(i)
        length = len(list)
    for i in range(0,length):
        sum+=int(list[i])
    flag+=chr(64+sum) print flag
```

cyberpeace{WELLDONE}

Railfence

这是栅栏密码，栏数为5

cyberpeace{railfence_cipher_gogogo}

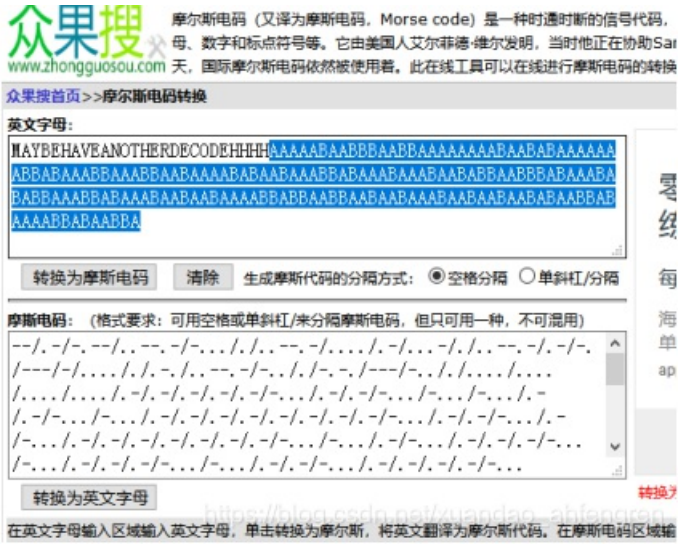
easy_RSA

运行python即可

```
def Exgcd(a, b):
    # ax+by=1,gcd(a,b)
    if b == 0:
        return (1, 0, a)
    (x, y, r) = Exgcd(b, a%b)
    temp = x
    x = y
    y = temp-a/b*y
    return (x, y, r)
def inv(a, n):
    # ax = 1 mod n
    (x, y, r) =Exgcd(a, n)
    if x<0:
        return x+n
    else:
        return x
p = 473398607161
q = 4511491
e = 17
N = p*q
phi_N = (p-1) * (q-1)
d = inv(e, phi_N)
print(d)
```

不仅仅是Morse

首先摩斯密码解密然后把HHH后面的拿去培根解密即可



然后就是把小写的字符串就是flag了

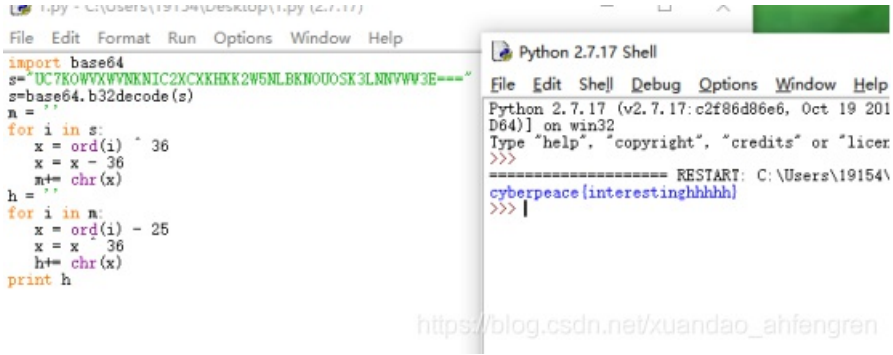
cyberpeace{attackanddefenceworldisinteresting}

Easychallenge

需要先把python的pyc文件进行反编译

之后运行代码即可

```
import base64
s="UC7KOWVXWVNKNIC2XCXKHKK2W5NLBKNOUOSK3LNNVWW3E==="
s=base64.b32decode(s)
m = ''
for i in s:
   x = ord(i) ^ 36
   x = x - 36
   m+= chr(x)
h = ''
for i in m:
   x = ord(i) - 25
   x = x ^ 36
   h+= chr(x)
print h
```



Normal_RSA

PCTF{256b_i5_m3dium}

转轮机加密

```
import re
sss = '1: < ZWAXJGDLUBVIQHKYPNTCRMOSFE < 2: < KPBELNACZDTRXMJQOYHGVSFUWI < 3: < BDMAIZVRNSJUWFHTEQGYXPLOCK
m = 'NFQKSEVOQOFNP'
# 将sss转化为列表形式
content=re.findall(r'< (.*?) <',sss,re.S)
# re.S:DOTALL，此模式下，"."的匹配不受限制，可匹配任何字符，包括换行符
iv=[2,3,7,5,13,12,9,1,8,10,4,11,6]
print(content)
vvv=[]
for i in range(13):
    index=content[iv[i]-1].index(m[i])
    vvv.append(index)
print(vvv)

for i in range(0,26):
    flag=""
    for j in range(13):
        flag += content[iv[j]-1][(vvv[j]+i)%26]
    print(flag.lower())
```

Fire开头的就是了，直接提交即可

easy_ECC

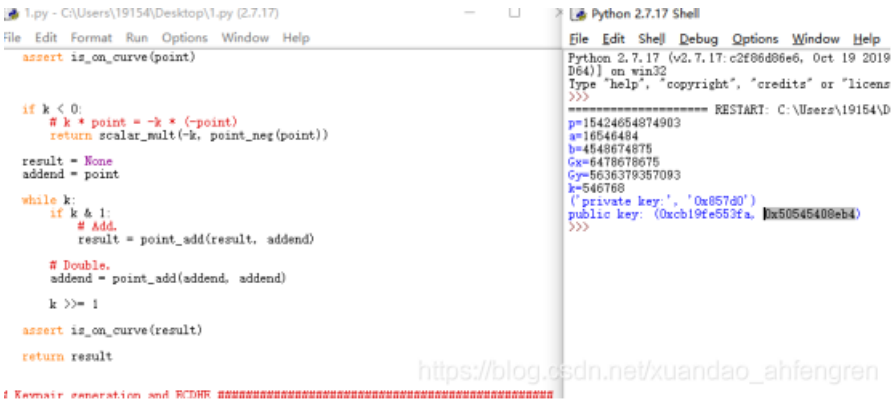
运行代码，然后把公匙的十六进制转换成十进制再相加即可

```
import collections
import random

EllipticCurve = collections.namedtuple('EllipticCurve', 'name p a b g n h')

curve = EllipticCurve(
   'secp256k1',
   # Field characteristic.
   p=int(input('p=')),
   # Curve coefficients.
   a=int(input('a=')),
   b=int(input('b=')),
   # Base point.
   g=(int(input('Gx=')),
      int(input('Gy='))),
   # Subgroup order.
   n=int(input('k=')),
```

```
    # Subgroup cofactor.
    h=1,
)


# Modular arithmetic ##########################################################

def inverse_mod(k, p):
    """Returns the inverse of k modulo p.

  This function returns the only integer x such that (x * k) % p == 1.

  k must be non-zero and p must be a prime.
  """
    if k == 0:
        raise ZeroDivisionError('division by zero')

    if k < 0:
        # k ** -1 = p - (-k) ** -1 (mod p)
        return p - inverse_mod(-k, p)

    # Extended Euclidean algorithm.
    s, old_s = 0, 1
    t, old_t = 1, 0
    r, old_r = p, k

    while r != 0:
        quotient = old_r // r
        old_r, r = r, old_r - quotient * r
        old_s, s = s, old_s - quotient * s
        old_t, t = t, old_t - quotient * t

    gcd, x, y = old_r, old_s, old_t

    assert gcd == 1
    assert (k * x) % p == 1

    return x % p


# Functions that work on curve points #########################################

def is_on_curve(point):
    """Returns True if the given point lies on the elliptic curve."""
    if point is None:
        # None represents the point at infinity.
        return True

    x, y = point

    return (y * y - x * x * x - curve.a * x - curve.b) % curve.p == 0


def point_neg(point):
    """Returns -point."""
    assert is_on_curve(point)

    if point is None:
        # -0 = 0
```

```
        return None

    x, y = point
    result = (x, -y % curve.p)

    assert is_on_curve(result)

    return result


def point_add(point1, point2):
    """Returns the result of point1 + point2 according to the group law."""
    assert is_on_curve(point1)
    assert is_on_curve(point2)

    if point1 is None:
        # 0 + point2 = point2
        return point2
    if point2 is None:
        # point1 + 0 = point1
        return point1

    x1, y1 = point1
    x2, y2 = point2

    if x1 == x2 and y1 != y2:
        # point1 + (-point1) = 0
        return None

    if x1 == x2:
        # This is the case point1 == point2.
        m = (3 * x1 * x1 + curve.a) * inverse_mod(2 * y1, curve.p)
    else:
        # This is the case point1 != point2.
        m = (y1 - y2) * inverse_mod(x1 - x2, curve.p)

    x3 = m * m - x1 - x2
    y3 = y1 + m * (x3 - x1)
    result = (x3 % curve.p,
              -y3 % curve.p)

    assert is_on_curve(result)

    return result


def scalar_mult(k, point):
    """Returns k * point computed using the double and point_add algorithm."""
    assert is_on_curve(point)



    if k < 0:
        # k * point = -k * (-point)
        return scalar_mult(-k, point_neg(point))

    result = None
    addend = point

    while k:
```

```
        if k & 1:
            # Add.
            result = point_add(result, addend)

        # Double.
        addend = point_add(addend, addend)

        k >>= 1

    assert is_on_curve(result)

    return result


# Keypair generation and ECDHE ###################################################

def make_keypair():
    """Generates a random private-public key pair."""
    private_key = curve.n
    public_key = scalar_mult(private_key, curve.g)

    return private_key, public_key



private_key, public_key = make_keypair()
print("private key:", hex(private_key))
print("public key: (0x{:x}, 0x{:x})".format(*public_key))
```



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进制	结果
二进制	1010000010100010
四进制	1100111011100020322
八进制	120250520107264
十进制	5520194834100

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计算器
标准
13957031351290 + 5520194834100 =
19,477,226,185,390
MC
MR
M+
M-
MS
%
CE
C
1/x
x²
∛x
÷
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攻略到这里结束了~~~~~~