

# Run the following code to decrypt the flag :

```
def deconv(cipher, key):
    LK = len(key)
    LP = len(cipher) - LK + 1
    inv_k0 = pow(key[0], -1, 256)
    P = [0] * LP
    for i in range(LP):
        s = 0
        for t in range(1, min(i+1, LK)):
            s += P[i-t] * key[t]
        P[i] = (cipher[i] - s) * inv_k0 % 256
    return bytes(P)

key =
b'\x ab\xec\xe9<\xaaC\x7fr\xeb\x8dgQ\xc0\x94\x01\x1d\xc03\x14\x97\xe2\x91\x97\xcf\x8b\x13?\x1d24w| '
cip_hex =
"17c080c00398a06e4661e403b2b571b578221bba83e235a0feece7213ad4d65c1d89c2a3afae5ef91bf7f2181f0c797505b7bd55c62d1edf2614b17f88f85eac674fb6d7be4e2a617605c68e1baf8603cb9b1d32b2bc1ab60d8c62b20be0bc0fb73a546b5641988a3bf8eeb778731e048970308d941a8bd5f6cb56159069364c93b5429afdb85f9dfb5f5b0ca44d314af68bc9d56b39321fe5cc072c9508978693ee60a9bfffff5b52f6aa0ca37f9b421eb402a4886b742570926b7479d2b89528caceb7121a338c233164c33a120b9813bc56b855c914124ecb30df3d4a14c92788faa7c9e32b544e24d9d9fe2a5539a280c28466dc6b276ba4b089fa26f8bace95f43f6c5d491e14e5fa09a853fff2dfd73a8cf8d7b54d3d8d693db7b182789f47e343e9cf56f8663e181a1e98276aface8b1052e3ee9c6630d69ad479bfe1106ec1ab585a030ca130a6d849f9c4bed9d0b16f46890f1efa66c8f21f078088f426ef0e1f9af315ae3b2356123df174bb4095ad2361237bedc3e62c294f8ccc135f9766f0ec2a462087cd2648"

cip_bytes = bytes.fromhex(cip_hex)
plain = deconv(cip_bytes, key)

print(plain)
```

THE FLAG :

CTF{89c5cce663fce1500d22c2ef5112dc2885c491d37d3503118251bdd516b4dcc0}  
~Z4que