

推测明文的过程：

```
# syml @ SYMLArch in ~/Temp/Crypto/home1 [11:57:25] C:130
$ python solve1-Interactive.py
##### Interactive #####
##### pos 0 #####
0 1 2 3 4 5 6 7 8 9 10
* * * * * w *
* * * * * e *
* * * * * t *
* * * * * t *
* * * * * y *
* * * * * t *
* * * * * t *
* * * * * w *
* * * * * a *
w e t t y t t w a * t
* * * * * t *
find any byte is space? y/Ny
which cipher text?[num]9
current:
['W', 'E', 'T', 'T', 'Y', 'T', 'T', 'W', 'A', ' ', 'T']
##### pos 1 #####
0 1 2 3 4 5 6 7 8 9 10
* * * * * E *
* * * * * U *
* * * * * H *
* * * * * H *
* * * * * O *
* * * * * H *
* * * * * H *
* * * * * E *
E U H H O H H E * t H
* * * * * t *
* * * * * H *
find any byte is space? y/Ny
which cipher text?[num]8
current:
['We', 'Eu', 'Th', 'Th', 'Yo', 'Th', 'Th', 'We', 'A ', 'T', 'Th']
##### pos 2 #####
0 1 2 3 4 5 6 7 8 9 10
* L E E U E E * H E
L * * * * L D *
* * * * * F M * *
```

根据推断出的明文片段推测、搜索到对应的原文，解密：

```
# syml @ SYMLArch in ~/Temp/Crypto/home1 [12:21:42] C:1
$ python solve1-finally.py
key is:
66396ec289c389c39bc398c38cc29874352ac38d63c295102ec2afc38e78c2aa7fc3ad28c2a07f6bc389c28d29c3850b69c2b033c29a19c3b8c2aa401ac29c6d70c28fc280c38066c38763c3bec3b0123148c38dc398c3a802c3905bc2a9c28777335dc2aec3bcc3acc395c29c433a6b26c28b60c2bf4ec3b03cc29a6110c298c2bb3ec29a3161c3adc387c2b804c2a33522c38fc39202c392c386c28c57376ec39bc2a8c382c38a50027c61246cc3a2c2a12b0c4502175010c380c2a1c2ba4625786dc2911100797dc28a47c3a9c28b0204c384c3af06c38867c2a950c3b11ac389c289c39ec2a8c28fc391c39bc3b1674874c29ec394c386c3b45b384cc29dc296c38411

cipher 8 is:
We can see the point where the chip is unhappy if a wrong bit is sent and consumes more power from the environment - Adi Shamir
# syml @ SYMLArch in ~/Temp/Crypto/home1 [12:21:53]
```

- 1 key:
- 2 66396ec289c389c39bc398c38cc29874352ac38d63c295102ec2afc38e78c2aa7fc3ad28c2a07f6bc389c28d29c3850b69c2b033c29a19c3b8c2aa401ac29c6d70c28fc280c38066c38763c3bec3b0123148c38dc398c3a802c3905bc2a9c28777335dc2aec3bcc3acc395c29c433a6b26c28b60c2bf4ec3b03cc29a6110c298c2bb3ec29a3161c3adc387c2b804c2a33522c38fc39202c392c386c28c57376ec39bc2a8c382c38a50027c61246cc3a2c2a12b0c4502175010c380c2a1c2ba4625786dc2911100797dc28a47c3a9c28b0204c384c3af06c38867c2a950c3b11ac389c289c39ec2a8c28fc391c39bc3b1674874c29ec394c386c3b45b384cc29dc296c38411
- 3 plaintext:
- 4 We can see the point where the chip is unhappy if a wrong bit is sent and consumes more power from the environment - Adi Shamir

```
1 # 推断 solve1-Interactive.py
2 from binascii import a2b_hex
3
4 hex_c = [
5     b"315c4eeaa8b5f8aaf9174145bf43e1784b8fa00dc71d885a804e5ee9fa40b16349c146fb77
6     8cdf2d3aff021dfff5b403b510d0d0455468aeb98622b137dae857553ccd8883a7bc37520e06e
7     515d22c954eba5025b8cc57ee59418ce7dc6bc41556bdb36bbca3e8774301fbcaa3b83b220809
8     560987815f65286764703de0f3d524400a19b159610b11ef3e",
9     b"234c02ecbbfbafa3ed18510abd11fa724fcda2018a1a8342cf064bbde548b12b07df44ba71
10    91d9606ef4081ffde5ad46a5069d9f7f543bedb9c861bf29c7e205132eda9382b0bc2c5c4b45f
11    919cf3a9f1cb74151f6d551f4480c82b2cb24cc5b028aa76eb7b4ab24171ab3cdadb8356f",
12    b"32510ba9a7b2bba9b8005d43a304b5714cc0bb0c8a34884dd91304b8ad40b62b07df44ba6e
13    9d8a2368e51d04e0e7b207b70b9b8261112bacb6c866a232dfe257527dc29398f5f3251a0d47e
14    503c66e935de81230b59b7afb5f41afa8d661cb",
15    b"32510ba9aab2a8a4fd06414fb517b5605cc0aa0dc91a8908c2064ba8ad5ea06a029056f47a
16    8ad3306ef5021eafe1ac01a81197847a5c68a1b78769a37bc8f4575432c198ccb4ef63590256e
17    305cd3a9544ee4160ead45aef520489e7da7d835402bca670bda8eb775200b8dabbbba246b130f
18    040d8ec6447e2c767f3d30ed81ea2e4c1404e1315a1010e7229be6636aaa",
19    b"3f561ba9adb4b6ebec54424ba317b564418fac0dd35f8c08d31a1fe9e24fe56808c213f17c
20    81d9607cee021dafe1e001b21ade877a5e68bea88d61b93ac5ee0d562e8e9582f5ef375f0a4ae
21    20ed86e935de81230b59b73fb4302cd95d770c65b40aaa065f2a5e33a5a0bb5dcaba43722130f
22    042f8ec85b7c2070",
23    b"32510bfbacfbb9befd54415da243e1695ecabd58c519cd4bd2061bbde24eb76a19d84aba34
24    d8de287be84d07e7e9a30ee714979c7e1123a8bd9822a33ecaf512472e8e8f8db3f9635c1949e
25    640c621854eba0d79eccf52ff111284b4cc61d11902aebc66f2b2e436434eacc0aba938220b08
26    4800c2ca4e693522643573b2c4ce35050b0cf774201f0fe52ac9f26d71b6cf61a711cc229f77a
27    ce7aa88a2f19983122b11be87a59c355d25f8e4",
28    b"32510bfbacfbb9befd54415da243e1695ecabd58c519cd4bd90f1fa6ea5ba47b01c909ba76
29    96cf606ef40c04afe1ac0aa8148dd066592ded9f8774b529c7ea125d298e8883f5e9305f4b44f
30    915cb2bd05af51373fd9b4af511039fa2d96f83414aaaf261bda2e97b170fb5cce2a53e675c15
31    4c0d9681596934777e2275b381ce2e40582afe7650b13e72287ff2270abcf73bb028932836fb
32    decfecee0a3b894473c1bbeb6b4913a536ce4f9b13f1efff71ea313c8661dd9a4ce",
33    b"315c4eeaa8b5f8bffd11155ea506b56041c6a00c8a08854dd21a4bbde54ce56801d943ba70
34    8b8a3574f40c00fff9e00fa1439fd0654327a3bfc860b92f89ee04132ecb9298f5fd2d5e4b45e
35    40ecc3b9d59e9417df7c95bba410e9aa2ca24c5474da2f276baa3ac325918b2daada43d671215
36    0441c2e04f6565517f317da9d3",
37    b"271946f9bbb2aeadec111841a81abc300ecaa01bd8069d5cc91005e9fe4aad6e04d513e96d
38    99de2569bc5e50eeeca709b50a8a987f4264edb6896fb537d0a716132ddc938fb0f836480e06e
39    d0fcd6e9759f40462f9cf57f4564186a2c1778f1543efa270bda5e933421cbe88a4a52222190f
40    471e9bd15f652b653b7071aec59a2705081ffe72651d08f822c9ed6d76e48b63ab15d0208573a
41    7eef027",
42    b"466d06ece998b7a2fb1d464fed2ced7641ddaa3cc31c9941cf110abbbf409ed39598005b339
43    9ccfafb61d0315fca0a314be138a9f32503bedac8067f03adbf3575c3b8edc9ba7f537530541a
44    b0f9f3cd04ff50d66f1d559ba520e89a2cb2a83",
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15     b"32510ba9babebbbefd001547a810e67149caee11d945cd7fc81a05e9f85aac650e9052ba6a
16     8cd8257bf14d13e6f0a803b54fde9e77472dbff89d71b57bdef121336cb85ccb8f3315f4b52e
17     301d16e9f52f904"
18 ]
19
20 c = []
21 for i in hex_c:
22     c.append(a2b_hex(i))
23
24 m = [" " for i in range(len(c))]
25
26 avavil_char = "ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz ,. '"
27
28 print("##### Interactive #####")
29 for i in range(30):
30     print(f"##### pos {i} #####")
31     for j in range(len(c)):
32         print(f"{j} ", end="")
33     print()
34     for j in range(len(c)):
35         for k in range(len(c)):
36             if chr(c[k][i] ^ c[j][i]) in avavil_char:
37                 print(f"{chr(c[k][i] ^ c[j][i])} ", end="")
38             else:
39                 print("* ", end="")
40         print()
41     ch = input("find any byte is space? y/N")
42     if ch == "y":
43         ind = int(input("which cipher text?[num]"))
44         m[ind] += " "
45         for j in range(len(c)):
46             if j == ind:
47                 continue
48             m[j] += chr(c[j][i] ^ c[ind][i] ^ ord(" "))
49     else:
50         for j in range(len(c)):
51             m[j] += "*"
52     print("current:\n",m)
53
54 '''select like this
55 ##### pos 16 #####
56 0 1 2 3 4 5 6 7 8 9 10
57 * * * * * * * * E * *
58 * * * * * * * * A * *
59 * * * * * * * * B * *
60 * * * * * * * * R * *
61 * * * * * * * * O * *
62 * * * * * * * * P * *
63 * * * * * * * * O * *
64 E A B R O P P O * O G
65 * * * * * * * * O * *
66 * * * * * * * * G * *
67 find any byte is space? y/Ny <-- user input
68 which cipher text?[num]8 <-- user input
69

```

```

1  # decrypt
2  # search on google
3  # text 6 is: There are two types of cyptography: one that allows the
   Government to use brute force to break the code, and one that requires the
   Government to use brute force to break you.
4  from binascii import a2b_hex, b2a_hex
5
6  hex_c = [
7
8      b"315c4eeaa8b5f8aaf9174145bf43e1784b8fa00dc71d885a804e5ee9fa40b16349c146fb77
      8cdf2d3aff021dfff5b403b510d0d0455468aeb98622b137dae857553ccd8883a7bc37520e06e
      515d22c954eba5025b8cc57ee59418ce7dc6bc41556bdb36bbca3e8774301fbcaa3b83b220809
      560987815f65286764703de0f3d524400a19b159610b11ef3e",
9
10     b"234c02ecbbfbafa3ed18510abd11fa724fcda2018a1a8342cf064bbde548b12b07df44ba71
      91d9606ef4081ffde5ad46a5069d9f7f543bedb9c861bf29c7e205132eda9382b0bc2c5c4b45f
      919cf3a9f1cb74151f6d551f4480c82b2cb24cc5b028aa76eb7b4ab24171ab3cdadb8356f",
11
12     b"32510ba9a7b2bba9b8005d43a304b5714cc0bb0c8a34884dd91304b8ad40b62b07df44ba6e
      9d8a2368e51d04e0e7b207b70b9b8261112bacb6c866a232dfe257527dc29398f5f3251a0d47e
      503c66e935de81230b59b7afb5f41afa8d661cb",
13
14     b"32510ba9aab2a8a4fd06414fb517b5605cc0aa0dc91a8908c2064ba8ad5ea06a029056f47a
      8ad3306ef5021eafe1ac01a81197847a5c68a1b78769a37bc8f4575432c198ccb4ef63590256e
      305cd3a9544ee4160ead45aef520489e7da7d835402bca670bda8eb775200b8dabbbba246b130f
      040d8ec6447e2c767f3d30ed81ea2e4c1404e1315a1010e7229be6636aaa",
15
16     b"3f561ba9adb4b6ebec54424ba317b564418fac0dd35f8c08d31a1fe9e24fe56808c213f17c
      81d9607cee021dafe1e001b21ade877a5e68bea88d61b93ac5ee0d562e8e9582f5ef375f0a4ae
      20ed86e935de81230b59b73fb4302cd95d770c65b40aaa065f2a5e33a5a0bb5dcaba43722130f
      042f8ec85b7c2070",
17
18     b"32510bfbacfbb9befd54415da243e1695ecabd58c519cd4bd2061bbde24eb76a19d84aba34
      d8de287be84d07e7e9a30ee714979c7e1123a8bd9822a33ecaf512472e8e8f8db3f9635c1949e
      640c621854eba0d79eccf52ff111284b4cc61d11902aebc66f2b2e436434eacc0aba938220b08
      4800c2ca4e693522643573b2c4ce35050b0cf774201f0fe52ac9f26d71b6cf61a711cc229f77a
      ce7aa88a2f19983122b11be87a59c355d25f8e4",
19
20     b"32510bfbacfbb9befd54415da243e1695ecabd58c519cd4bd90f1fa6ea5ba47b01c909ba76
      96cf606ef40c04afe1ac0aa8148dd066592ded9f8774b529c7ea125d298e8883f5e9305f4b44f
      915cb2bd05af51373fd9b4af511039fa2d96f83414aaaf261bda2e97b170fb5cce2a53e675c15
      4c0d9681596934777e2275b381ce2e40582afe67650b13e72287ff2270abcf73bb028932836fb
      decfecee0a3b894473c1bbeb6b4913a536ce4f9b13f1efff71ea313c8661dd9a4ce",
21
22     b"315c4eeaa8b5f8bfdd11155ea506b56041c6a00c8a08854dd21a4bbde54ce56801d943ba70
      8b8a3574f40c00fff9e00fa1439fd0654327a3bfc860b92f89ee04132ecb9298f5fd2d5e4b45e
      40ecc3b9d59e9417df7c95bba410e9aa2ca24c5474da2f276baa3ac325918b2daada43d671215
      0441c2e04f6565517f317da9d3",
23
24     b"271946f9bbb2aeadec111841a81abc300ecaa01bd8069d5cc91005e9fe4aad6e04d513e96d
      99de2569bc5e50eeeca709b50a8a987f4264edb6896fb537d0a716132ddc938fb0f836480e06e
      d0fcd6e9759f40462f9cf57f4564186a2c1778f1543efa270bda5e933421cbe88a4a52222190f
      471e9bd15f652b653b7071aec59a2705081ffe72651d08f822c9ed6d76e48b63ab15d0208573a
      7eef027",

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```
16     b"466d06ece998b7a2fb1d464fed2ced7641ddaa3cc31c9941cf110abbbf409ed39598005b339
    9ccfafb61d0315fca0a314be138a9f32503bedac8067f03adbf3575c3b8edc9ba7f537530541a
    b0f9f3cd04ff50d66f1d559ba520e89a2cb2a83",
17
    b"32510ba9babebbbefd001547a810e67149caee11d945cd7fc81a05e9f85aac650e9052ba6a
    8cd8257bf14d13e6f0a803b54fde9e77472dbff89d71b57bddef121336cb85ccb8f3315f4b52e
    301d16e9f52f904"
18 ]
19
20 c = []
21 for i in hex_c:
22     c.append(a2b_hex(i))
23
24 key = []
25 plain1 = b"There are two types of cyptography: one that allows the Government
    to use brute force to break the code, and one that requires the Government to
    use brute force to break you."
26
27 for i in range(len(plain1)):
28     key.append(plain1[i]^c[6][i])
29
30 key_string = ""
31 for i in key:
32     key_string += chr(i)
33
34 print("key is:")
35 print(b2a_hex(key_string.encode()).decode())
36
37 print("\ncipher 8 is:")
38 for i in range(len(c[7])):
39     print(chr(c[7][i]^key[i]),end="")
40
41 print()
```