

花生省反術

題目

有一位法師正在施法，口中唸唸有詞，似乎是這張紙條上面的文字，花生省反術.txt，最後說出了一句，"97，Inverse~"。

解題



題目給了一串數字以及對應的規則，而看起來應該也是用模數的方法去對應表

```
1 arr = [770, 39, 441, 595, 385, 120, 503, 147, 756, 85, 549, 680, 197, 457, 602, 136, 211, 402, 294, 92, 473, 608, 308, 729, 682, 178]
2 char = ["a","b","c","d","e","f","g","h","i","j","k","l","m","n","o","p","q","r","s","t","u","v","w","x","y","z"] # 1~26
3 uchar = ["A","B","C","D","E","F","G","H","I","J","K","L","M","N","O","P","Q","R","S","T","U","V","W","X","Y","Z"] # 27~52
4 ichar = ["0","1","2","3","4","5","6","7","8","9"] # 53~62
5 bchar = ["{","}","_"] # 63~65
6
```

所以我們先把對應的字串寫上，但模數的模究竟是什麼？

看了題目，數字只有 97，所以我們用 97 去代入

```
1 arr = [770, 39, 441, 595, 385, 120, 503, 147, 756, 85, 549, 680, 197, 457, 602, 136, 211, 402, 294, 92, 473, 608, 308, 729, 682, 178]
2 char = ["a","b","c","d","e","f","g","h","i","j","k","l","m","n","o","p","q","r","s","t","u","v","w","x","y","z"] # 1~26
3 uchar = ["A","B","C","D","E","F","G","H","I","J","K","L","M","N","O","P","Q","R","S","T","U","V","W","X","Y","Z"] # 27~52
4 ichar = ["0","1","2","3","4","5","6","7","8","9"] # 53~62
5 bchar = ["{","}","_"] # 63~65
6
7 for i in arr:
8     i %= 97
9     if i < 26: print(char[i - 1],end="")
10    elif i < 52: print(uchar[i - 26 - 1],end="")
11    elif i < 62: print(ichar[i - 52 - 1],end="")
12    elif i < 66: print(bchar[i - 62 - 1],end="")
13
```

問題 輸出 偵錯主控台 終端機

```
PS E:\PekoFLAG\peasy> & C:/Users/jjkk9/AppData/Local/Programs/Python/Python310/python.exe e:/PekoFLAG/peasy/solution.py
M0mwrX}actMqncZqXcrcKU
PS E:\PekoFLAG\peasy>
```

這次所得出的答案似乎不是真正的答案

題目中還講了一個 " Inverse "
 想到模倒數
 所以立馬寫了一個模倒數的函式再帶入

```

6
7  def modInverse(A, M):
8      for X in range(1, M):
9          if (((A % M) * (X % M)) % M == 1):
10             return X
11     return 0
12
13  for i in range(len(arr)):
14      arr[i] = modInverse(arr[i],97)
15
16  for i in arr:
17      if i < 26: print(char[i - 1],end="")
18      elif i < 52: print(uchar[i - 26 - 1],end="")
19      elif i < 62: print(ichar[i - 52 - 1],end="")
20      elif i < 66: print(bchar[i - 62 - 1],end="")
21

```

問題
 輸出
 偵錯主控台
 終端機

```

PS E:\PekoFLAG\peasy> & C:/Users/jjkk9/AppData/Local/Programs/Python/Python310/python.exe e:/PekoFLAG/peasy/solution.py
M0mvrX}actMqncZqXcrckU
PS E:\PekoFLAG\peasy> & C:/Users/jjkk9/AppData/Local/Programs/Python/Python310/python.exe e:/PekoFLAG/peasy/solution.py
pekoFLAG{hUa_SHeNg_5h3NG_fA_5hu}

```

果然答案在另一面，用模倒數的方式得出了答案，pekoFLAG{hUa_SHeNg_5h3NG_fA_5hu}

答案

pekoFLAG{hUa_SHeNg_5h3NG_fA_5hu}