38. Write a python program for Hill cipher succumbs to a known plaintext attack if sufficient plaintext ciphertext pairs are provided. It is even easier to solve the Hill cipher if a chosen plaintext attack can be mounted. Implement in python programming.

Code:

```
text=input("TEXT: ").upper(); K=[[3,3],[2,5]]

if len(text)%2: text+="X"

r=""

for i in range(0,len(text),2):

    a,b=ord(text[i])-65, ord(text[i+1])-65

    x=(a*K[0][0]+b*K[0][1])%26

    y=(a*K[1][0]+b*K[1][1])%26

    r+=chr(x+65)+chr(y+65)

print("Encrypted:", r)
```

```
Python 3.14.0 (tags/v3.14.0:ebf955d, Oct  7 2025, 10:15:03) [MSC v.1944 64 bit
AMD64)] on win32
Enter "help" below or click "Help" above for more information.
>>>
============== RESTART: C:/Users/Maria/OneDrive/Documents/ex38.py =============
TEXT: SIMATS
Encrypted: AYKYHY
>>>
```