

MysteryTwister C3

THE CRYPTO CHALLENGE CONTEST

FIND THE RIGHT ROUTE – PART 3

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Introduction

This series deals with a grid – a basic tool cryptographers use to separate sequences of data into columns and rows. It is very common and appears in substitution ciphers (like Vigenère or Playfair) or in transposition ciphers (like columnar transposition, route cipher, or grille cipher) or in ciphers that use both substitution and transposition (like ADFGVX).

The purpose of the grid is to give a plaintext, ciphertext, or a key some structure so that the encryption/decryption process can be done more systematically.

Challenge (1/2)

The process of solving this challenge is similar to attacking the route cipher where the attacker has to identify the secret pattern inside the grid that has been used for encryption.

Start by looking at the first image – which should be self-explanatory and should give you enough hints to find the right route in order to reveal the plaintext of the second image.

Image 1

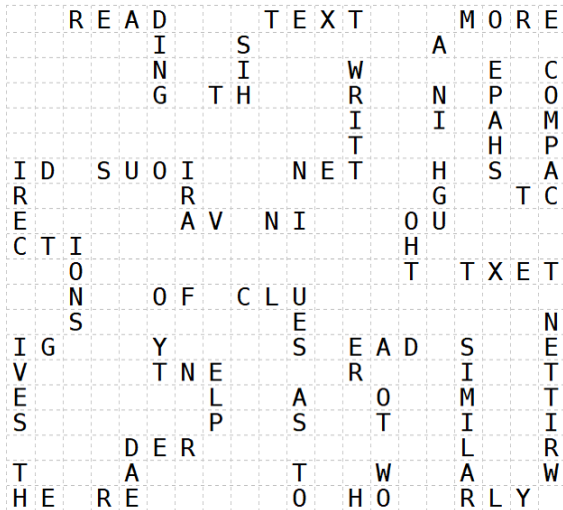


Image 2

E D G D N G R V M T F T T O
L L R I I C U E O O E H G T
F I I L L L O F R P L T I O
Y L F F O L W H T T F O R P
T E E C E H T # R H E G R I
E S P A H I E L U O F N E D
L T R E B L T T E R Y T W S
P M D O R H P L A O T H T K
C O U C P A B E E F G E # I
A G N I D N A T H T N I P P

Image 3

X S G I N S E E S O N X O I W O
H A L G E T B X T X H G N X H E
T W S X S X S P X A A R T X T R
X I I N A X E X D E O X X G X E
A S E U Y C N E P L X E H T E W
O A N X G E I S D I E X M M E X
X X J O X N N L T X Y X D A E H
R X I M D R I H A A X A E L X R
Y U L X A H O A G T W W H X A S
A T R L X P X N X O X K T X V R
X C O F A X R E H N R X O E X E
A S O H U E X T X N X X F X Y E
G X X R E L N H N O X G X O E R
A L R D X T O Y T X U D N I X N
X I W L I E U X E S A O D X O X
O X E E W Y O Y X I X X X L X I

Challenge (2/2)

To solve this challenge you may either need to print the particular image and use a pen or need to open it in an image editor and use a brush tool. The images can also be found in the attached zip file.

The solution consists of the following parts:

word1 – 3th word of plaintext of second image

word2 – 6th word of plaintext of second image

sentence – the whole plaintext of the last image

Please enter the solution in capital letters with spaces between the words in the following format:

word1 word2, sentence

Hints

1. It is necessary to understand the meaning of the plaintexts.
2. The python code provided in the additional zip file may be handy (grid.py).

It transforms a string stored in the variable 'text' into a grid of 'c' columns.

To execute the code, copy and paste it into a python compiler of your choice. If you want to do it online, you can use for example https://www.w3schools.com/python/trypython.asp?filename=demo_compiler. To execute it, click the green "Run" button.

Rewrite string variable 'text' with your own text. Rewrite 'c' in 'grid(text,c)' with the number of your choice.