

MysteryTwister C3

THE CRYPTO CHALLENGE CONTEST

POLYHOMOPHONIC SUBSTITUTION – PART 2

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Introduction

This part of the challenge series is a warm-up with polyphonic substitution. In a polyphonic substitution cipher, more than one plaintext letter are encrypted to the same ciphertext symbol. The key is a mapping from the set of plaintext symbols to the set of ciphertext symbols. The mapping is not 1-to-1, but each plaintext symbol has only one image. For example, if the plaintext uses the letters a, b, c, and the ciphertext uses the letters X and Y, then one possible mapping is

$$a \rightarrow X \quad b \rightarrow Y \quad c \rightarrow Y$$

With this key, the plaintext “cab” would be encrypted to “YXY”.

Challenge (1/2)

In the following ciphertext, each ciphertext letter can represent either of two plaintext letters. The key is a randomly generated 2-to-1 mapping from A...Z to A...M. The plaintext is in English.

Decrypt it. The answer to the challenge is the answer to the question at the end of the plaintext. Please enter your answer as one word in all capital letters, with no punctuation.

Challenge (2/2)

JMIEAKGDEEEJIGBEJMIHDGLBJGJBAJGKKEBADJFEEJIGACJMIEDJGJFJMIABIICJE
JMGJADBBJBJIBJMFBDICJKEADBJFBDICJKEACJMIABIICJJEJMGJADBBJMIEDJFB
DICJKEJMIKGDHIEJGDIJMIIBHMJFKGJIJEKBJMJMIDIGGBJFIDBIBJHEGGKKIDABII
CJEJMIKFGDCFKGJIJEGJFEGGKKEAKGDEEEJIGBAFBIACJMIABIICJJEJMGJADBBJJM
IEDJBJFBDICJKEJMIGAAJEJKAGDIKGDHIDJMGJMIIEGGKKIEJFKGJIJGIDCDEJMIE
AKGDEEEJIGCADGIFCADDFAJJEHBHBBKBAJEIGDEGHACDAGJMIHDGLBJGJBAJGKCAK
KGFEIACGHBGJBJJJIDEJIKKGDGAKICDKGDCKADFJMILGEJGGIADBJEACJMIEEEJIGE
GGEEBEBJMIEDJKBJMJMIGGIADBJEACJMIDIGGBJBHJGGEECAJGJBJIFBJIDFBJIDJ
MICADDEGGKIDBJJIDFKGJIJEGIDCDELIDJDEIGDJMGJFGGDEGDIJIDDIJDBGKFKG
JIJEBIBJHFBGGBKCEAGFAEIFACDACMGJFGIJGKJMICADDADJIDFKGJIJEGDIHBJGJ
JFKGJIJEBIBJHEDBEJGJJBGKKEGADIGGEEBLIJMGJMIJIDDIJDBGKEJMIJKAKGDH
IEJIDFBJIDGJFEGJDDJGDHGEHBJJEBIBJHCAGFAEIFGGBJKEACMEFDAHIJGJFMIK
BDGJMIJKAADJIDGAEJFKGJIJEDDGJDEGJFJIFJDJIGDIBCIHBJGJEBIBJHCAGFAEIF
GAEJKEACEDBEJGJCIKBJMDIKGJBLIKEMBMHGKJBJHJFABJJEACAGFGDIFKBJMMEFDA
HIJGJFMIKBDGCGKKIFLAKGJBKIEEDCMGEKJIDGGGAJBGGJFGIJMGJIGKKIBHMJFKG
JIJEMGLIGKGAJCBDCDKGDADBBJEJMGJKBIBJMBJGJIGDKECKGJFBCECGKKIFJMI
CKBFJBCKMBCMBEJMIKGDHIEJFKGJIJBADDEAKGDEEEJIG