

MysteryTwister C3

THE CRYPTO CHALLENGE CONTEST

POLYHOMOPHONIC SUBSTITUTION – PART 3

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Introduction

And now... meet the polyhomophonic substitution cipher. Here, each ciphertext symbol can represent one of several plaintext symbols, and each plaintext letter can be encrypted as one of several ciphertext letters. The key is a mapping from the set of plaintext symbols to the set of ciphertext symbols. For example, if the plaintext uses the letters a, b, c, and the ciphertext uses the letters X, Y and Z, then one possible mapping is

$$a \rightarrow X \text{ or } Y \quad b \rightarrow Y \text{ or } Z \quad c \rightarrow X \text{ or } Z$$

With this key, the plaintext “cab” would be encrypted to “XXY” or “ZYY”, etc.

Challenge (1/2)

In the following ciphertext, each plaintext letter can be encrypted to one of two ciphertext letters, and each ciphertext letter represents one of two plaintext letters. The key is a randomly generated mapping from the 26 letters A...Z to A...Z. All decisions made during the encryption were also done randomly. 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)

INJJJFCKWKEVBXNWKJSALBQKSPWLLJLSKSSCBWTNISMJGSDSJAYSJAHIAMRAFHLWVWJKJQWQOW
XBLKJNWFJBLKIAZEXWTEJOWRXWIUYWHIKABAAIOYRWCEVZYFISEKJCOIOYHYMYMBZCRQEVVSVXI
NBEUSEUSCACSYMKUBIUHBBAMCJNEPYBITBOAHSJNWPLSDBRYSKZEHIYEHPNWXCBSGSHZSIZSELP
LAACBEMLEHBCKBSUWPJBBCWCESEUBJLUSEHJKUWFXWJKUSJXSWAOINBZETEZWLBKYKNHAXCFW
BVWCEKIUBPSSLSLPZWHIWFWCSEIHBYBVUBAMSHWSCOSXELXPLYNVBXTBETVSZYVAGJJIXARPW
LTEIKNEIIWZBMARKUBNYHBPNWVPVJOSOCLPWCPUWJRYBBBFJSLKWBBNSWJKATSKNSYCBNNAPL
BNXNWINBXWJKEBIWCGETAFIYSHABSWLXYLBOARNNOUJXEFSLKJHBVUQFVWVMWSXNWFADSWCS
EKRSZSBUJGCYRECICYCZAYBYTWFKIYNUYZSGSRSKNJLTINWKNEMMBLBXXYFVPQAZBWJEOYZMVB
IBJCHMHJFSEBVKNSEUBWSSNWPKYYPYNWFAXNEKWSBWSBJNWGSDSSCXAJCTOARYJVBALJYOUSW
HJJWKJLEIRBSWLPJXSIUBWSSWSBWFCAQIFHLEBBSYCRJIWJWGBHSFIHECTSVAAIWL TORSWK
HSINEIFBSZJKANWDSDBCWJJBZTBSXOHYZDWKJYOYKNBHELJYWBWJWIVAAPJWBWKIBBBJPSWVWR
TSQWKNJIUEDWKFBRWFEDSWDSRJKSSINWIEWBBWPSEBERGBAFKHWQUOBEKUBREYWPXVSOWCGBHB
JPBEYLTXSEXKNJTELXBCARZAFJSSBFIEUIJBBYIALSBHMEFKSAFWLKAKEYKVVVUXWOOSHSCIX
AHVXXUJQNSAWFIJVFIFYGSHUYCRVBMIFNACBPBRVJIBGWEIFWBBUSDSHSHKNJLTKUWKBWDSJACY
EPWTEFOERJIPYSJCYKBAJFKWLNNBHSBBFBALBEHIUJIFYRWGWCJXWISDEOIKAWMSHWAXJLSWH
INJUWFIYHSNUSCZWXWTEJOERNWFFIWVBMERIOYVWCVWCPEOHJQEWKXNJONIWZSKNSWLOBFKYH
JYOKUSYWPWTWFQWLBBYCRJXSHSKNBPAYWLELILHJYEIBJLWBVINBXYRBPNNBLEYXWGWFORJUS
BHSPAMMWLAKUBJLPJWLAQBELJKDBQWZBBLKWRVSUVJYVWIBXMRAZEBBINBSDABFKJYLERSOUE
CGBJINWKKYAILVEQSJLINSRSFKAMKNBNYHVXJKWJWBWMBREMIOAZWPWOMSRLIIWYBJKJFCAN
EBZYFIVJPBWKJLUMRWTJBSJBMWHEIBLVWCSINNWKWJKUSCEZSAOKNSELJZEVIUWIBAAIJBJPBE
UARFSTFKUWFDVWOIECXUJKBJIHJMBJ