

Q1 Commands

5 Points

List the commands used in the game to reach the first ciphertext.

go
read
enter
read

Q2 Cryptosystem

5 Points

What cryptosystem was used at this level?

Substitution cipher in which digits(0-9) were shifted by 4 places to the left. For alphabets, random substitution is used.

Q3 Analysis

25 Points

What tools and observations were used to figure out the cryptosystem?

NOTE: Failing to provide proper analysis would result in zero marks for this assignment.

The ciphertext was decrypted using an online decoder referenced below. The obtained plaintext from the decoder had this sentence - "THE CODE USED FOR THIS MESSAGE IS A SIMPLE SUBSTITUTION CIPHER IN WHICH DIGITS HAVE BEEN SHIFTED BY 8 PLACES". But password with digits shifted by 8 places is not correct. So it means that '8' (digits) is not decrypted by online tool. Then using Brute-force method, we tried to shift the digits in password by 0-9 places in both left and right directions. Finally, the shift to left by 4 places gives the right answer.

From this we get that 8 when moved to left by 4 places is 4, which supports our answer, i.e., "THE CODE USED FOR THIS MESSAGE IS A SIMPLE SUBSTITUTION CIPHER IN WHICH DIGITS HAVE BEEN SHIFTED BY 4 PLACES".

So, the final answer/password is given by substituting the alphabets according to the mapping provided in the next answer and the digits are shifted by 4 places to the left.

Reference-

<https://www.dcode.fr/monoalphabetic-substitution>

Q4 Mapping

10 Points

What is the plaintext space and ciphertext space?

What is the mapping between the elements of plaintext space and the elements of ciphertext space? (Explain in less than 100 words)

Plaintext space is {a-z,A-Z,0-9}

Ciphertext space is {a-z,A-Z,0-9}

The mapping between the elements of plaintext and ciphertext are -

Plaintext 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 0 1

2 3 4 5 6 7 8 9

Ciphertext p o i u y t r e w c q k j h g f d s a m n b v l x z 6 7

8 9 0 1 2 3 4 5

Note - Capital alphabets also follow same mapping as above.

Q5 Password

5 Points

What is the final command used to clear this level?

tyRgU69diqq

Q6 Codes

0 Points

Upload any code that you have used to solve this level

 No files uploaded

Q7 Team Name

0 Points

force_de_fem

Assignment 1

● Graded

Group

ASHEE JAIN

Kriti Majumdar

Srujana Sabbani

 [View or edit group](#)

Total Points

20 / 50 pts

Question 1

[Commands](#)

5 / 5 pts

Question 2

[Cryptosystem](#)

3 / 5 pts

Question 3

[Analysis](#)

0 / 25 pts

Question 4

[Mapping](#)



7 / 10 pts

Question 5

[Password](#)

5 / 5 pts

Question 6

Codes

0 / 0 pts

Question 7

Team Name

0 / 0 pts