Q1 Commands
5 Points

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

```
climb
read
enter
read
```

Q2 Cryptosystem
5 Points

What cryptosystem was used at this level?

```
Substitution cipher(Symmetric crypography) and frequency
analysis
```

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.

```
From the encypted cyphertext, We started with single letter
words, then bigrams and trigrams
*******Format followed:******
***Step number****
***letter(encrypted till now) - guessed_letter (options)***
***reason***

Step 1:
p - a (a, i)
```

Reason: The letter is small and is not the starting of a sentence so that cannot be i.

Step 2:
Mewa wa - This is (This is, What at , Come me,Moon on, Soon on,Upon on,Axis is,Roof of)
Reason : Felt meaningful and 'Pa' in second line becomes 'As'(p is already replaced by a)

Step 3
y-e
Reason:The third word mey(changed to thy) can be 'the'

Step 4
whmysyam (ihtesest)--interest
Reason:I_te_est is the word to be decrypted and interest is only word that fits.

Step 5
twsam (tirst)-First (first,hirst,birst)
Reason:For _irst and considering the possible options ,"This is the first" is more meaningful than the remaining words

Step 6
gt (gf)-Of (if,of,af)
Reason:Since w is replaced with i and af doesnt make sense in message we considered 'of'

Step 7
hgmewhr (nothinr)-Nothing
Reason:Nothing is the only option we found that can be considerable

Step 8
aewtmyu (shifteu)-Shifted
Reason:Only option that is found to be considerable

Step 9
nayu (nsed)-used
Reason:_sed only u can be filed in the gap

Step 10
jywapry (jessage)-Message
Reason:Only option found

Step 11
anoamwmnmwgh(suostitution)-substitution
Reason:Obvious option

Step 12
epby(habe)-Have
Reason:"Ha_e been" have perfectly fits

Step 13
ox (bx)-by
Reason:" shifted b_" by perfectly fits

Step 14
iph (ian)-Can (ban, ran, can,tan)
Reason:"As you _an see" can perfectly fits the word

Step 15
Iwfeys (cifher)-Cipher (ciber,cipher)
Reason:"Substitution ci_her" cipher is an obvious match

Step 16
Vewie fpaavgsu vwmegnm(vhich passvord vithout)-Which
password without
Reason:W perfectly fits in place of v in all three words

Step 17
awjfky (simpke)-simple
Reason:"Is a simp_e substitution cipher " simple is meaningful
in the sentence

Step 18
dngmya (duotes)-quotes
Reason:" The password is "tyRgU03diqq" without the _uotes"
quotes perfectly suits the sentence.

Step 19
 kpmys fkpiya(Kater pkaces)-later places
Reason:'l' in place of 'k' perfectly makes the words meaningful

Step 20:
We tried the given password "tyRgU03diqq" as the command but it was showing invalid, so we thought that even 8,0,3 i.e digits can be encrypted. Hence with brute foce method we tried digits(0,1,2,3,...) and figured out that "6" is encrypted as "8" and accordingly with brute force we shifted 0 by 6 and 3 with 9. And we got the command to solve the level. command recovered - "tyRgU69diqq".

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: Message that can be read without any decryption
Ciphertext space: Message that is not readable, exists in different patterns and needs a decryption key to make it readable.

guessed_letter	letter
a	p
t	m
h	e
i	w
s	a
e	y
n	h
r	s
f	t
o	g
g	r
d	u

u	n
m	j
b	o
v	b
y	x
c	i
p	f
w	v
q	d
l	k
6	8
6	0
9	3

THIS IS THE FIRST CHAMBER OF THE CAVES.
AS YOU CAN SEE, THERE IS NOTHING OF
INTEREST IN THE CHAMBER. SOME OF THE LATER
CHAMBERS WILL BE MORE INTERESTING THAN
THIS ONE! THE CODE USED FOR THIS MESSAGE
IS A SIMPLE SUBSTITUTION CIPHER IN WHICH
DIGITS HAVE BEEN SHIFTED BY 8 PLACES.
THE PASSWORD IS "TYRGU03DIQQ" WITHOUT THE
QUOTES

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

```
hustler
```

Assignment 1   ● **Graded**

Group

SANDULA LAVANYA
SHRUTIKA ANIL JADHAV
ABHIVADAN

✏ View or edit group

Total Points

28 / 50 pts

Question 1
Commands   **5** / 5 pts

Question 2
Cryptosystem   **3** / 5 pts

Question 3
Analysis   **10** / 25 pts

Question 4
Mapping   **5** / 10 pts

Question 5
Password   **5** / 5 pts

Question 6
Codes   **0** / 0 pts

Question 7
Team Name   **0** / 0 pts