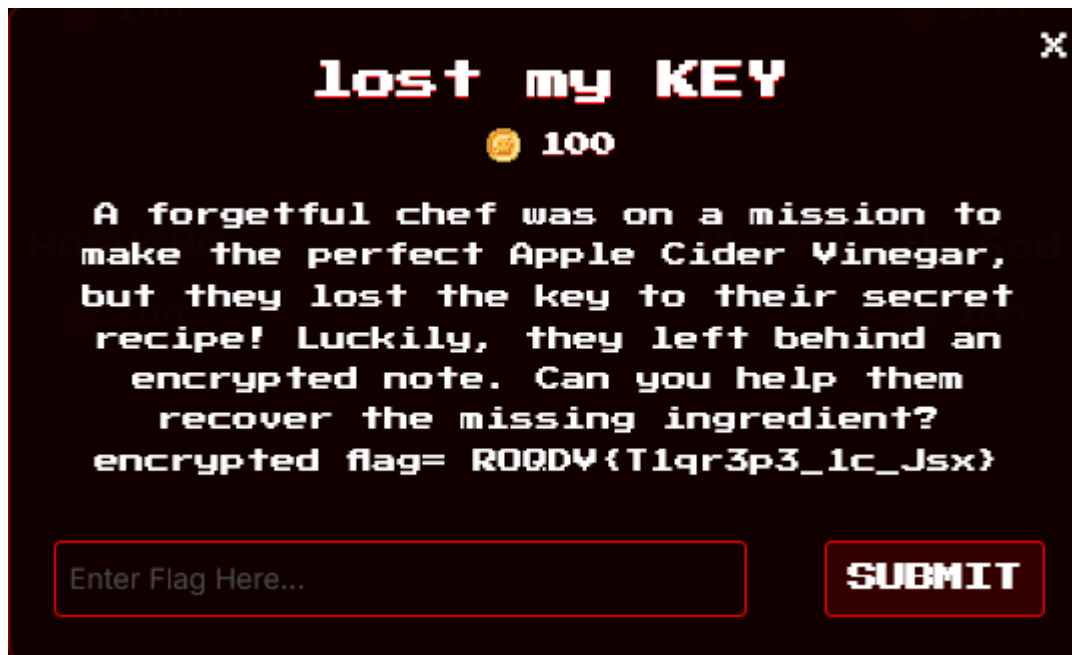
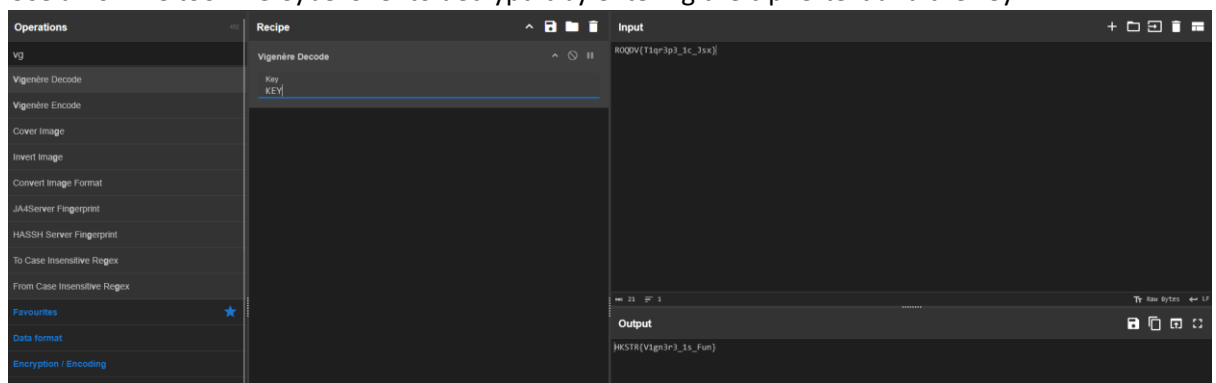


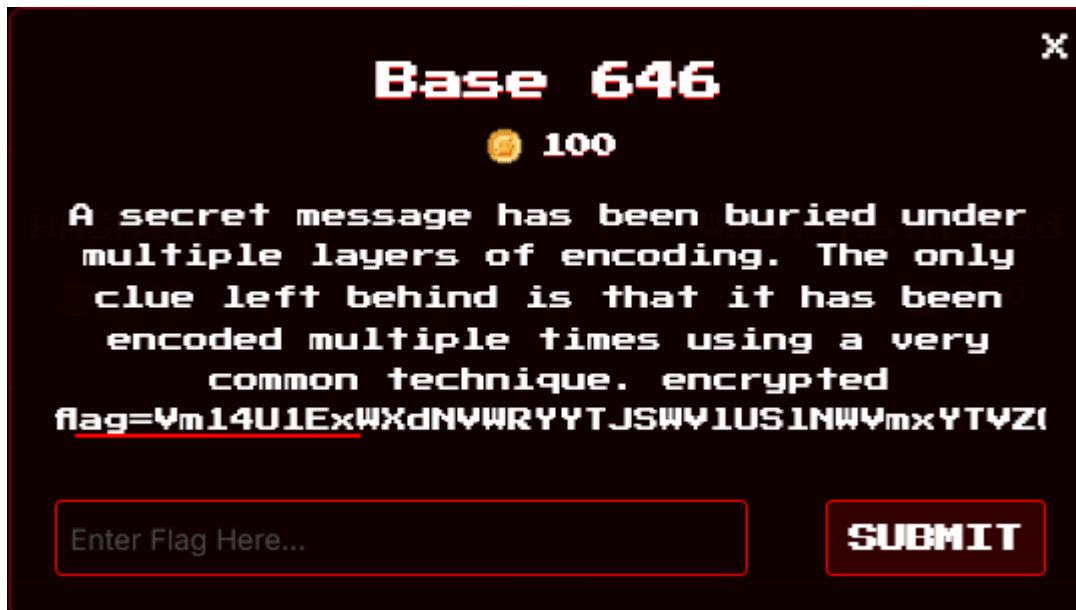
1. lost my KEY



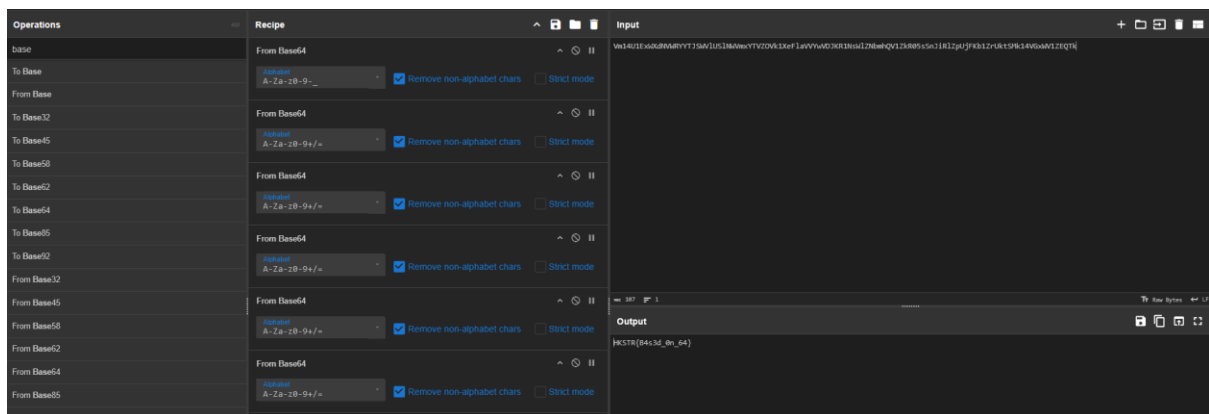
- The word 'vinegar' hints at the Vigenère cipher.
- But vigenere cipher needs a key to decrypt it , so the key ="KEY" as in the title word KEY is highlighted out.
- Use an online tool like CyberChef to decrypt it by entering the ciphertext and the key



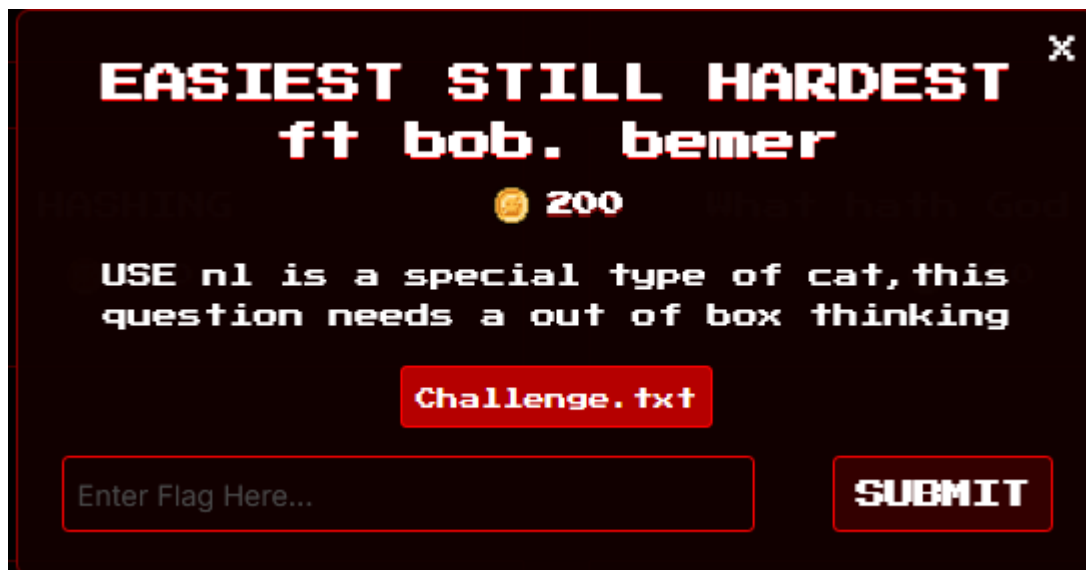
2. Base 64



- Here the title name is base 6 4 6 ,
- As base 64 is a encoding scheme so,
- Base 64 * 6 times will solve the question



3.easiest still hardest



This question requires out-of-the-box thinking, as in CTF question can be created in any new or old way.

In this challenge the word bob berner depicts the person who invented ASCII system.

Now the command “nl” is a special command in linux to list the content in file like cat command but with line number ,

Now after opening the file with nl command we will get this type of view

```
32 .
33 .
34 .
35 .
36 .
37 .
38 .
39 .
40 .
41 .
42 .
43 .
44 .
45 .
46 .
47 .
48 7,11,19
49 3
50 .
51 16
52 .
53 .
54 .
55 .
56 18
57 .
58 .
59 .
60 .
61 .
62 .
63 .
64 .
65 .
66 .
67 .
68 .
69 .
70 12
71 .
72 2,15
73 .
74 .
75 5
76 .
77 .
78 4
79 .
80 .
81 .
82 .
83 .
84 1,9,14
85 8
86 .
87 .
88 20
89 .
90 .
91 .
92 .
93 .
94 .
95 6,10,13,17
```

In this the

number 1 is written at 84

number 2 is written at 72

number 3 is written at 49

number 4 is written at 78

number 5 is written at 75

number 6 is written at 95

number 7 is written at 48

number 8 is written at 85

number 9 is written at 84

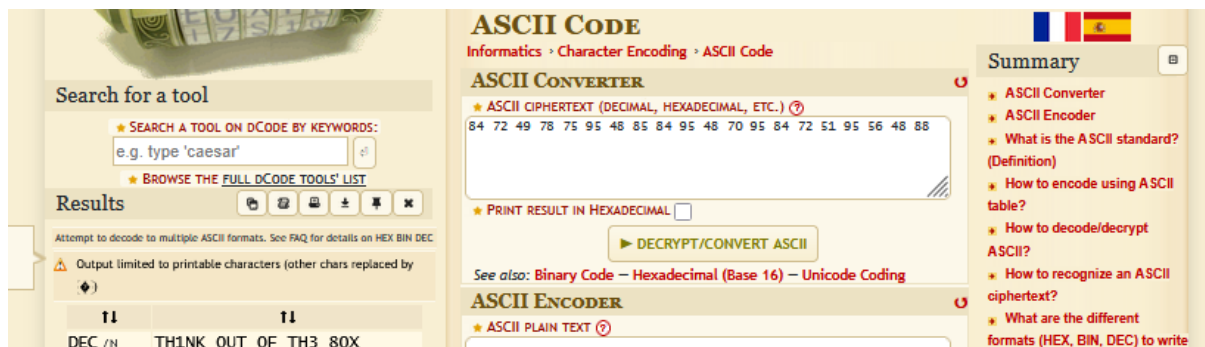
number 10 is written at 95

number 11 is written at 48

and so on...

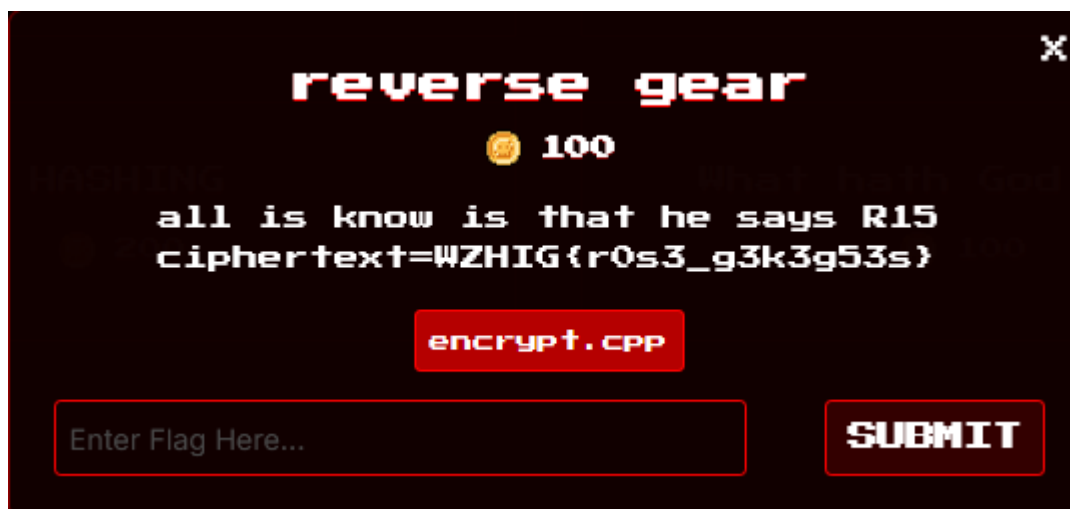
making it all together "84 72 49 78 75 95 48 85 84 95 48 70 95 84 72 51 95 56 48 88"

now we can decode it using any ascii converter ,



The screenshot shows a web interface for an ASCII converter. On the left, there's a search bar with the text "e.g. type 'caesar'". Below it, a "Results" section displays a decoded string: "TH1NK_OUT_OF_TH3_80X". The main area is titled "ASCII CODE" and "ASCII CONVERTER". It contains a text input field with the string "84 72 49 78 75 95 48 85 84 95 48 70 95 84 72 51 95 56 48 88" and a "DECRYPT/CONVERT ASCII" button. Below this is an "ASCII ENCODER" section with a "PLAIN TEXT" input field. On the right, a "Summary" sidebar lists various ASCII-related tools and definitions.

4. Reverse Gear

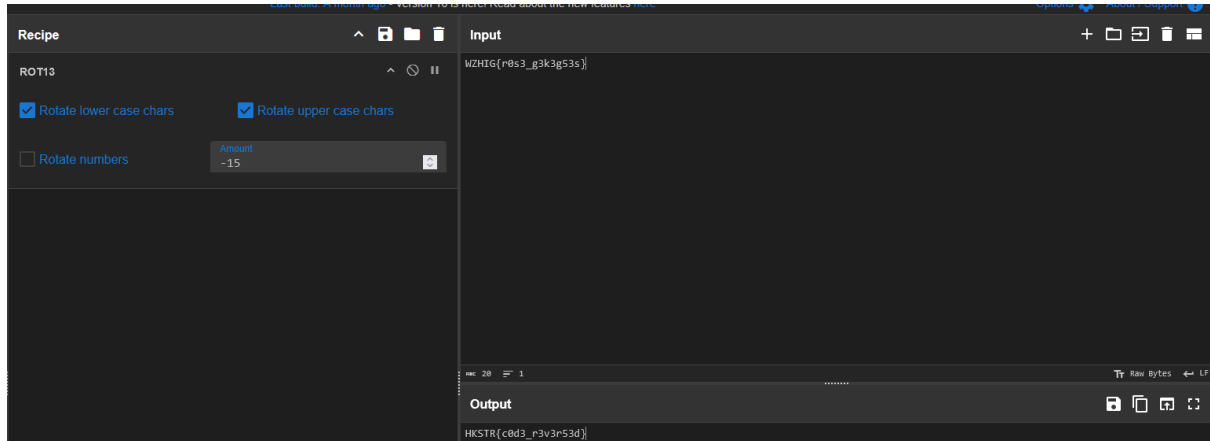


The screenshot shows a challenge interface titled "reverse gear". It has a dark background with a red border. The title "reverse gear" is in a stylized font. Below it, a gold coin icon is next to the number "100". The challenge text reads: "all is know is that he says R15 ciphertext=WZHIG{r0s3_g3k3g53s}". At the bottom, there's a red button labeled "encrypt.cpp", a text input field with the placeholder "Enter Flag Here...", and a red button labeled "SUBMIT".

This question name tells that we need to reverse the code ,but there is also a hint that it is a rot15

As by analysing the code you can know it ,or by the word “R15” so to reverse it we need to reverse it by -15.

Solution:



Or by

Writing the code or modifying the code:

```
1 #include <iostream>
2 using namespace std;
3
4 int main() {
5     string text;
6     int shift;
7
8     cout << "Text: ";
9     getline(cin, text);
10    cout << "Shift: ";
11    cin >> shift;
12
13    for (char &c : text)
14        if (isalpha(c))
15            c = (c - (isupper(c) ? 'A' : 'a') + shift) % 26 + (isupper(c) ? 'A' : 'a');
16
17    cout << "Encrypted: " << text << endl;
18    return 0;
19 }
```

Into

```

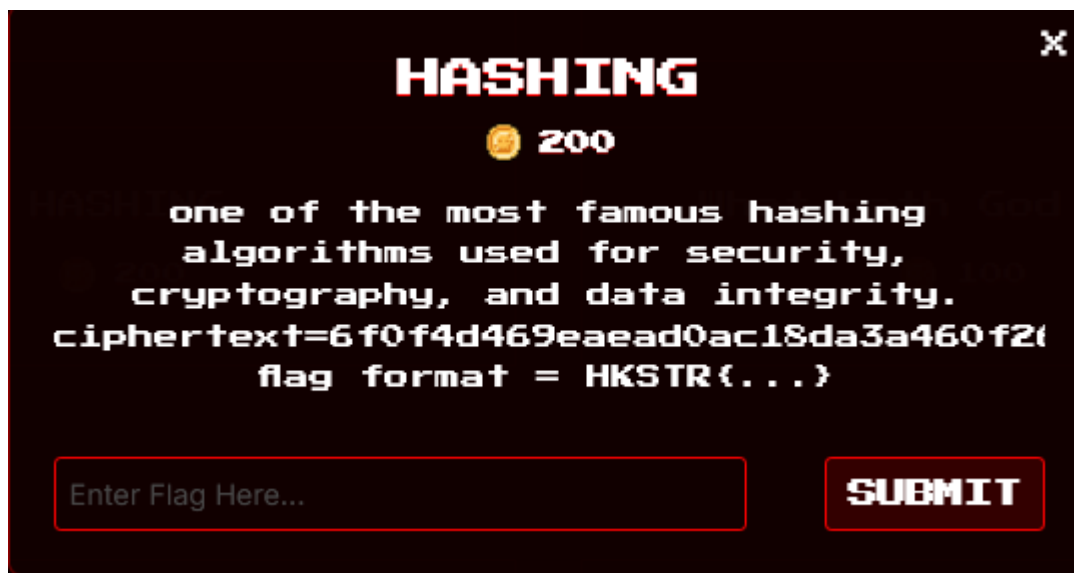
105 #include <iostream>
106 using namespace std;
107
108 int main() {
109     string text;
110     int shift;
111
112     cout << "Text: ";
113     getline(cin, text);
114     cout << "Shift: ";
115     cin >> shift;
116
117     for (char &c : text)
118         if (isalpha(c))
119             c = (c - (isupper(c) ? 'A' : 'a') - shift + 26) % 26 + (isupper(c) ? 'A' : 'a');
120
121     cout << "Encrypted: " << text << endl;
122     return 0;
123 }

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL COMMENTS

Text: WZHIG{r0s3_g3k3g53s}
Shift: 15
Encrypted: HKSTR{c0d3_r3v3r53d}

5.Hashing



Here most famous hashing can be sha or md5 like hashes as these are the most famous one so:

Hit and trail for the famous hashing one by one .

Or use tool like hash-identifier.

We came to know that it is a MD5

Now to decode it use any tool like decode fr,



The screenshot shows the dCode website's MD5 Decoder tool. On the left, there's a search bar with the text "PASSWORD123" and a "Results" section showing "MD5". On the right, the "MD5 DECODER" section has a "MD5 HASH" input field containing "6F0F4D469EAEAD0AC18DA3A460F263B6". Below this, there are "OPTIONS" for "SALT PREFIXED MD5(SALT+WORD)" and "SALT SUFFIXED MD5(WORD+SALT)", both with empty input fields. A "DECRYPT" button is located below the options. At the bottom, there's a link "See also: Hash Function - SHA-1 - SHA-256 - Crypt() Hashing Function".

6.What hath God wrought



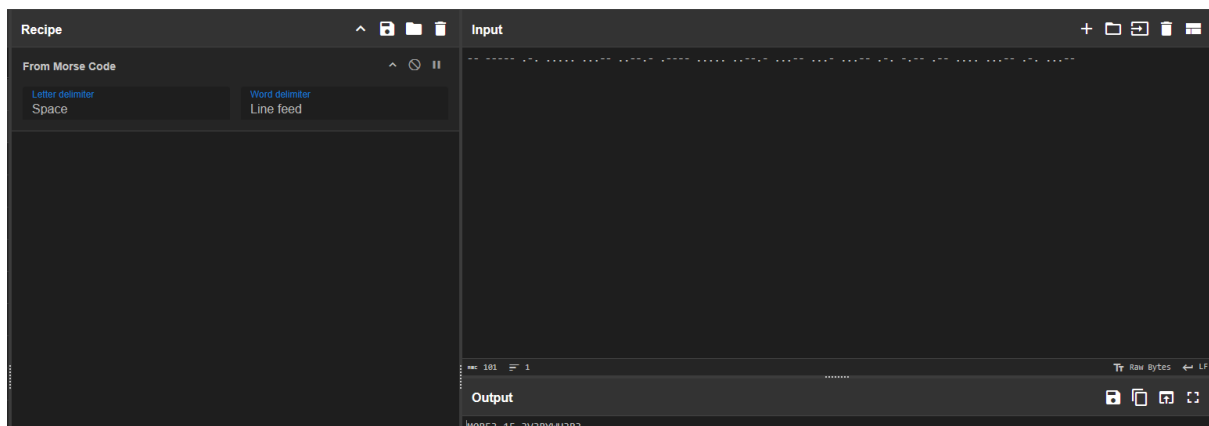
The screenshot shows a challenge interface with a dark background and red text. The title "What hath God wrought" is at the top, followed by a gold coin icon and the number "100". Below this, the text "its seems to be distorted ciphertext=--" is displayed, followed by several lines of distorted text. At the bottom, there is an input field labeled "Enter Flag Here..." and a red "SUBMIT" button.

In this the title : "what hath god wrought"

When we google search this we can know that it is the first sentence to be send as morse code.

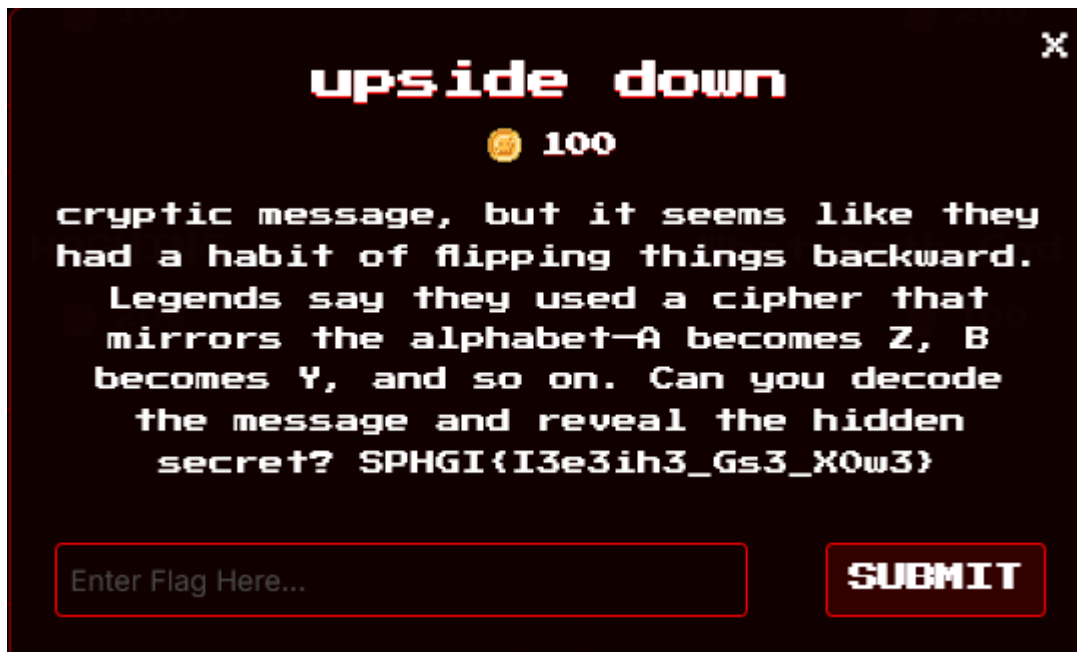
So it is a morse code .

Decode it using any online tool like decode fr ,cyberchef,etc



The screenshot shows the CyberChef online tool interface. On the left, the "Recipe" panel is visible, showing "From Morse Code" with "Letter delimiter" set to "Space" and "Word delimiter" set to "Line feed". On the right, the "Input" panel shows a large area for pasting text. At the bottom, the "Output" panel displays the decoded result: "MORSE_15_3V3RYM43R3".

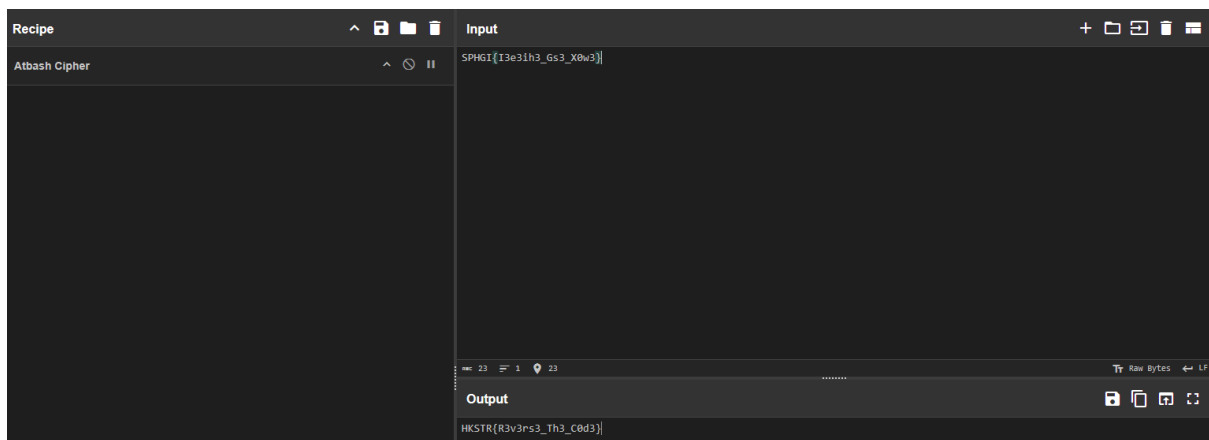
7.Upside Down



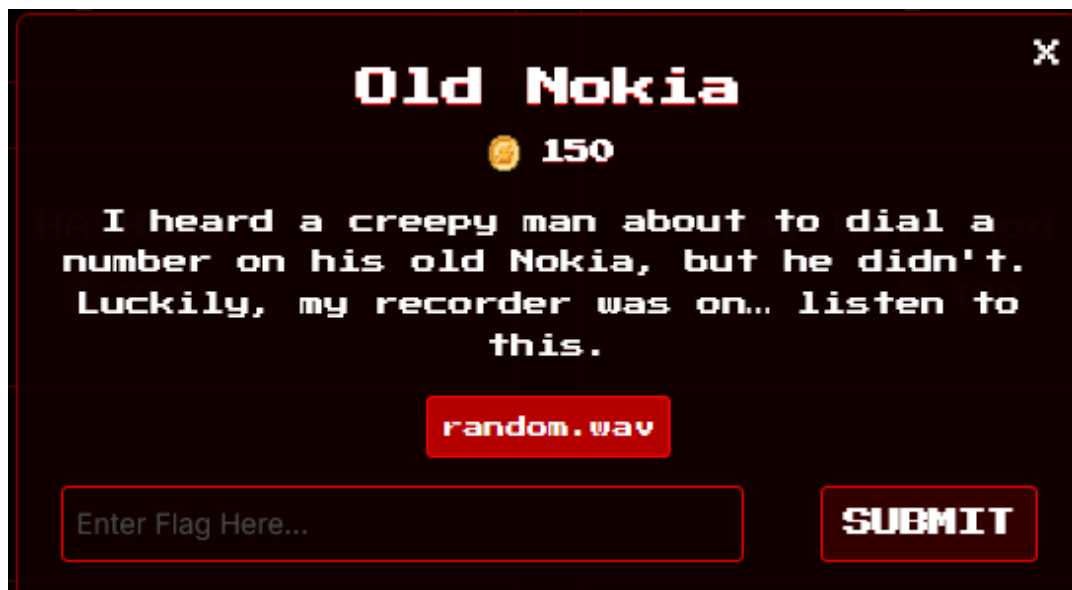
In this question the word upside down indicates towards the reversing like words ,

So in description it also says that a cipher that convert A->Z,B->Y, etc

It is atbash cipher ,use any tool like decode fr ,cyberchef,cryptii,etc



8.Old Nokia



In old nokia phones there was DTMF (dual tone multiple frequency) system, which produces a sound when a key stroke is pressed ,

So the sound and description indicated toward dtmf encoding

So decode it using any online tool like DTMF decoder

DTMF Decoder

Audio file:

random.wav

Sensitivity threshold:

0.050



Output

```
0001s 777..222.....
0002s .....777..555.....
0003s .....888..
0004s 333.....
0005s .....888..444.....
0006s .....888..222..
0007s .....
0008s 111..222..333.....
0009s .....666..888..
0010s .....
0011s 555..555.....
0012s .....777..777.....
0013s .....777..
0014s 000.....
0015s .....999..555.....
0016s .....888..777..
0017s .....
0018s 555..222.....
0019s .....555..333.....
0020s .....999..
0021s 555.....
0022s .....666..777.....
0023s .....111..111..
0024s 444.....
0025s .....555..222.....
0026s .....999..000..
0027s .....
0028s 888..999.....
0029s .....111..222..555..
```

Decoded: 727583848212368557770958752539567114529089125

It gives ascii number now decode it using any decoder, to get the flag ,DTMF encoding are always decrypted to first ASCII then text.



Search for a tool

★ SEARCH A TOOL ON DCODE BY KEYWORDS:

e.g. type 'boolean'

★ BROWSE THE [FULL DCODE TOOLS' LIST](#)

Results



Attempt to decode to multiple ASCII formats. See FAQ for details on HEX BIN DEC

⚠ Output limited to printable characters (other chars replaced by
◆)

↑↓	↑↓
DEC /N	HKSTR{D7MF_W45_Cr4ZY}

ASCII Code

Informatics > Character Encoding > ASCII Code

ASCII CONVERTER

★ ASCII CIPHERTEXT (DECIMAL, HEXADECIMAL, ETC.) (?)

727583848212368557770958752539567114529089125

★ PRINT RESULT IN HEXADECIMAL ☐

► DECRYPT/CONVERT ASCII

See also: [Binary Code](#) — [Hexadecimal \(Base 16\)](#) — [Unicode Coding](#)

ASCII ENCODER

★ ASCII PLAIN TEXT (?)