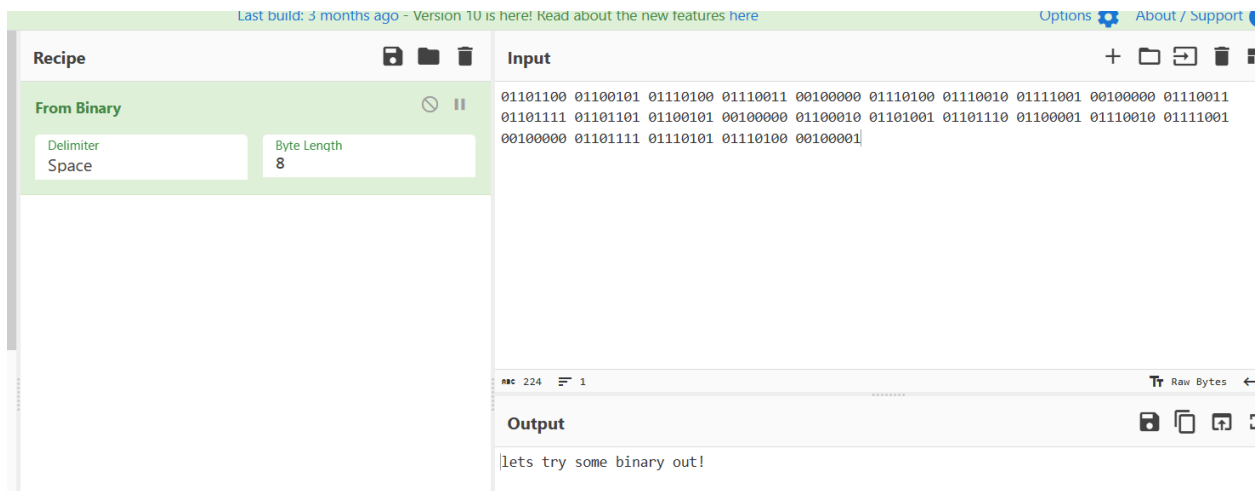


Task 1 Translation & Shifting

c4n y0u c4p7u23 7h3 f149?

➔ can you capture the flag?

```
01101100 01100101 01110100 01110011 00100000 01110100 01110010
01111001 00100000 01110011 01101111 01101101 01100101 00100000
01100010 01101001 01101110 01100001 01110010 01111001 00100000
01101111 01110101 01110100 00100001
```



➔ lets try some binary out!

MJQXGZJTGIQGS4ZAON2XAZLSEBRW63LNN5XCA2LOEBBVIRRHOM=====

ABC 56 1

Raw Bytes LF

Output



Recipe (click to load)	Result snippet	Properties
<code>From_Base32('A-Z2-7=',false)</code>	base32 is super common in CTF's	Possible languages: English Catalan Italian French Matching ops: From Hexdump Valid UTF8 Entropy: 4.00
	MJQXGZJTGIQGS4ZAON2XAZLSEBRW63LNN5XCA2LOEBBVIRRHOM=====	Matching ops: From Base32, From Base64, From Base85 Valid UTF8

MJQXGZJTGIQGS4ZAON2XAZLSEBRW63LNN5XCA2LOEBBVIRRHOM=====

=

➔ base32 is super common in CTF's

RWFjaCBCYXNINjQgZGlnaXQgcmVwcmVzZW50cyBleGFjdGx5IDYgYml0cyBv
ZiBkYXRhLg==

CR
RWFjaCBCYXNlNjQgZGlnaXQgcmlvcmVzZW50cyBleGFjdGx5IDYgYml0cyBvZiBkYXRhLg==

abc 74 2 Raw Bytes LF

Output

Recipe (click to load)	Result snippet	Properties
From_Base64('A-Za-z0-9+/',true,false)	Each Base64 digit represents exactly 6 bits of data.	Possible languages: Catalan English Portuguese

➔ Each Base64 digit represents exactly 6 bits of data.

Recipe

Magic
Depth 3 ☐ Intensive mode
☐ Extensive language support
Crib (known plaintext string or regex)

Input
68 65 78 61 64 65 63 69 6d 61 6c 20 6f 72 20 62 61 73 65 31 36 3f

abc 65 1 Raw Bytes LF

Output

Recipe (click to load)	Result snippet	Properties
From_Hex('Space')	hexadecimal or base16? D	Valid UTF8 Entropy: 3.94
	68 65 78 61 64 65 63 69 6d 61 6c 20 6f 72 20 62 61 73 65 31 36 3f	Matching ops: From Hex, From Hexdump Valid UTF8 Entropy: 3.04

68 65 78 61 64 65 63 69 6d 61 6c 20 6f 72 20 62 61 73 65 31 36 3f

➔ hexadecimal or base16?

Recipe	Input
ROT13 <div> <input checked="" type="checkbox"/> Rotate lower case chars <input checked="" type="checkbox"/> Rotate upper case chars <input type="checkbox"/> Rotate numbers Amount: 13 </div>	Ebgngr zr 13 cynprf!
	abc 20 1 Output Rotate me 13 places!

Ebgngr zr 13 cynprf!
 -> Rotate me 13 places!

Recipe	Input
ROT47 <div> Amount: 47 </div>	*@F DA:? >6 C:89E C@F?5 323J C:89E C@F?5 Wcf E:>6DX
	abc 51 1 Output You spin me right round baby right round (47 times)

*@F DA:? >6 C:89E C@F?5 323J C:89E C@F?5 Wcf E:>6DX
 -> You spin me right round baby right round (47 times)

1. The first part of the document is a list of references. The references are listed in two columns. The first column contains references to books and articles, and the second column contains references to books and articles. The references are listed in alphabetical order.


➔ TELECOMMUNICATION ENCODING

85 110 112 97 99 107 32 116 104 105 115 32 66 67 68

abc 51 1

Raw Bytes LF

Output

Recipe (click to load)	Result snippet	Properties
From_Decimal('Space',false)	Unpack this BCD 	Valid UTF8 Entropy: 3.77
	85 110 112 97 99 107 32 116 104 105 115 32 66 67 68	Matching ops: From Base64, From Decimal, From Hexdump Valid UTF8 Entropy: 3.05

85 110 112 97 99 107 32 116 104 105 115 32 66 67 68

➔ Unpack this BCD

LS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0KLS0t
LS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLi0tLS0gLS0tLS0gLi0tLS0KLS0tLS0g
LS0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi
0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tL
S0gLS0tLS0gLi0tLS0gLi0tLS0gLi0tLS0gLi0tLS0KLS0tLS0gLi0tLS0gLi0t
LS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLS0tLS0gLi0tL
S0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0
gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gL
S0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0t
LS0gLS0tLS0gLi0tLS0gLS0tLS0gLi0tLS0KLS0tLS0gLS0tLS0gLi0tLS0gLS0tLS0
gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS
S0tLS0gLS0tLS0gLi0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLi0tL
S0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS
0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS
0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLi0tLS
0gLS0tLS0gLS0tLS0KLS0tLS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0g

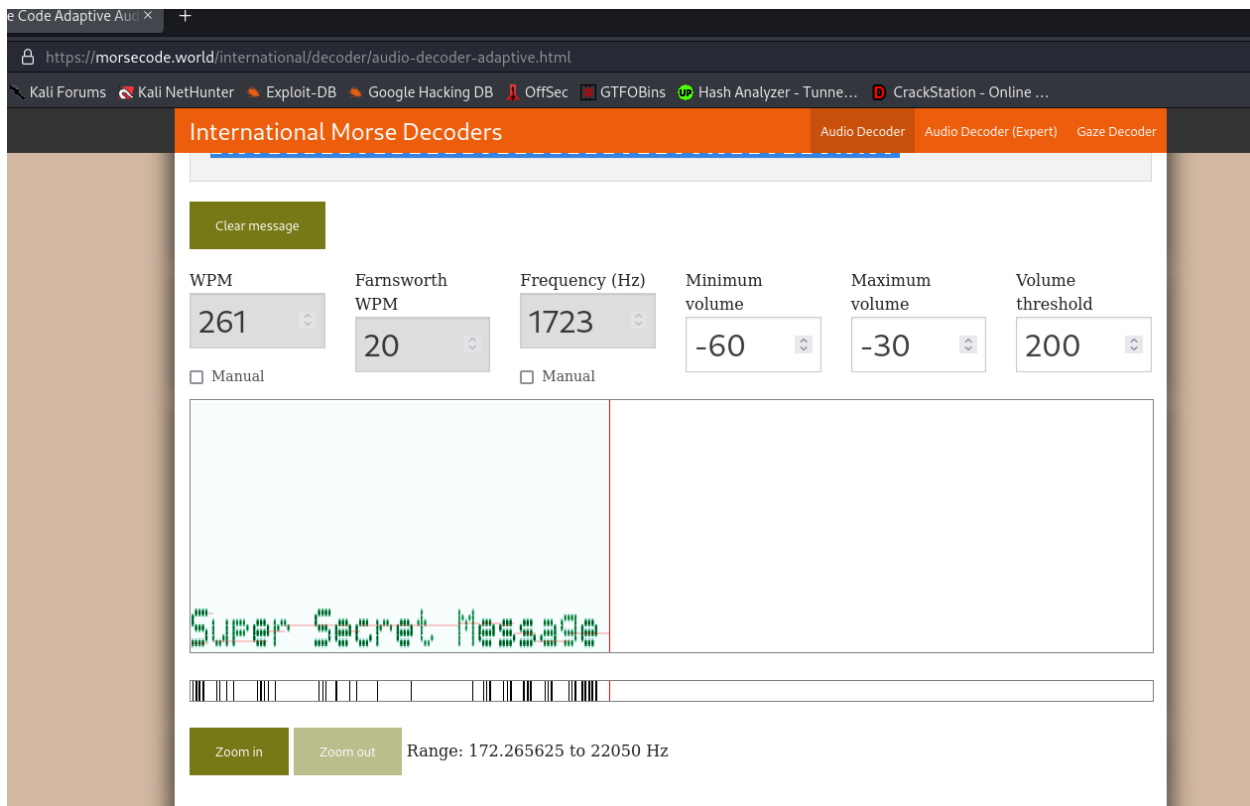
LS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLi0t
LS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS
0gLi0tLS0KLS0tLS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0g
LS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS
0tLS0KLS0tLS0gLi0tLS0gLS0tLS0gLi0tLS0gLi0tLS0gLi0tLS0gLi0tLS0gLi0tLS0K
LS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0t
LS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tL
S0gLi0tLS0gLi0tLS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS0KLS0tLS0g
Li0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0KLS0tLS0gLS0t
LS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS
0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0g
LS0tLS0gLi0tLS0gLi0tLS0gLi0tLS0gLi0tLS0gLi0tLS0KLS0tLS0gLi0tLS0gLi0tLS0
gLS0tLS0gLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0KLS0tLS0gLS0tLS0gLi0tLS0gLS
0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tL
S0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLS0tLS0gLi0tLS0
gLi0tLS0gLi0tLS0gLi0tLS0gLi0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tL
S0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS
0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0g
LS0tLS0gLi0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0t
LS0gLS0tLS0gLi0tLS0KLS0tLS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS
0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0g
LS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS
0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLi0tLS0gLS0tLS
0gLi0tLS0KLS0tLS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0g
LS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLi0tLS0gLi0tLS0gLi0tLS0gLi0tLS0K
LS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLi0tLS0gLi0tLS0KLS0t
LS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tL
S0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0
gLi0tLS0gLS0tLS0gLi0tLS0gLi0tLS0gLi0tLS0gLi0tLS0gLi0tLS0KLS0tLS0gLi0tLS
0gLi0tLS0gLS0tLS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLS0tLS0g
Li0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0t
LS0gLS0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0g
LS0tLS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLS0tLS0gLi0tLS0gLS
0tLS0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS
0tLS0gLS0tLS0gLS0tLS0gLi0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS
0gLS0tLS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0g
Li0tLS0gLi0tLS0gLS0tLS0KLS0tLS0gLS0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0t
LS0gLS0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS
0gLi0tLS0gLS0tLS0KLS0tLS0gLi0tLS0gLi0tLS0gLS0tLS0gLS0tLS0gLS0tLS

[illegible]

[illegible][illegible]

sometimes called sonographs, voiceprints, or voicegrams. When the data is represented in a 3D plot they may be called waterfalls.

```
(root@kali)-[/home/kali/Downloads]
# ls
1.txt          index.html      secretaudio.wav
cacert.der     index_tmp.pngml TrinhVietHieu.ovpn
```



Answer the questions below

➔ Super Secret Message

Task 3 Steganography

Steganography is the practice of concealing a file, message, image, or video within another file, message, image, or video.

```
(root@kali)-[/home/kali/Downloads]
# file stegosteg.jpg
stegosteg.jpg: JPEG image data, JFIF standard 1.01, resolution (DPI), density 96x96, segment length 16, baseline, p
recision 8, 254x343, components 3
```

```
(root@kali)-[/home/kali/Downloads]
# strings stegosteg.jpg
JFIF
$3br
%&'()*456789:CDEFGHIJSTUVWXYZcdefghijstuvwxz
#3R
&'()*56789:CDEFGHIJSTUVWXYZcdefghijstuvwxz
u-g[
.GN?
```

```
(root@kali)-[/home/kali/Downloads]
# steghide extract -sf stegosteg.jpg
Enter passphrase:
wrote extracted data to "steganopayload2248.txt".

(root@kali)-[/home/kali/Downloads]
# cat steganopayload2248.txt
SpaghettiSteg

(root@kali)-[/home/kali/Downloads]
#
```

Answer the questions below

Decode the image to reveal the answer.

➔ SpaghettiSteg

Task 4

Security through obscurity is the reliance in security engineering on the secrecy of the design or implementation as the main method of providing security for a system or component of a system.

```
(root@kali)-[/home/kali/Downloads]
# file meme.jpg
meme.jpg: JPEG image data, JFIF standard 1.01, resolution (DPI), density 72x72, segment length 16, Exif Standard: [
TIFF image data, big-endian, direntries=1, orientation=upper-left], baseline, precision 8, 492x471, components 3
```

```
(root@kali)-[/home/kali/Downloads]
# strings meme.jpg
JFIF
"Exif
$3br
%&'()*456789:CDEFGHIJSTUVWXYZcdefghijstuvwxzy
```

```
{@84
2$Es
i2Mc
IEND
"AHH_YOU_FOUND_ME!"
hackerchat.png
```

Answer the questions below

Download and get 'inside' the file. What is the first filename & extension?

➔ hackerchat.png

Get inside the archive and inspect the file carefully. Find the hidden text

➔ AHH_YOU_FOUND_ME!