

Introduction to Steganography

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Plan



**WHAT IS
STEGANOGRAPHY ?**



**HOW
STEGANOGRAPHY
WORKS ?**



**TOOLS FOR
STEGANOGRAPHY**

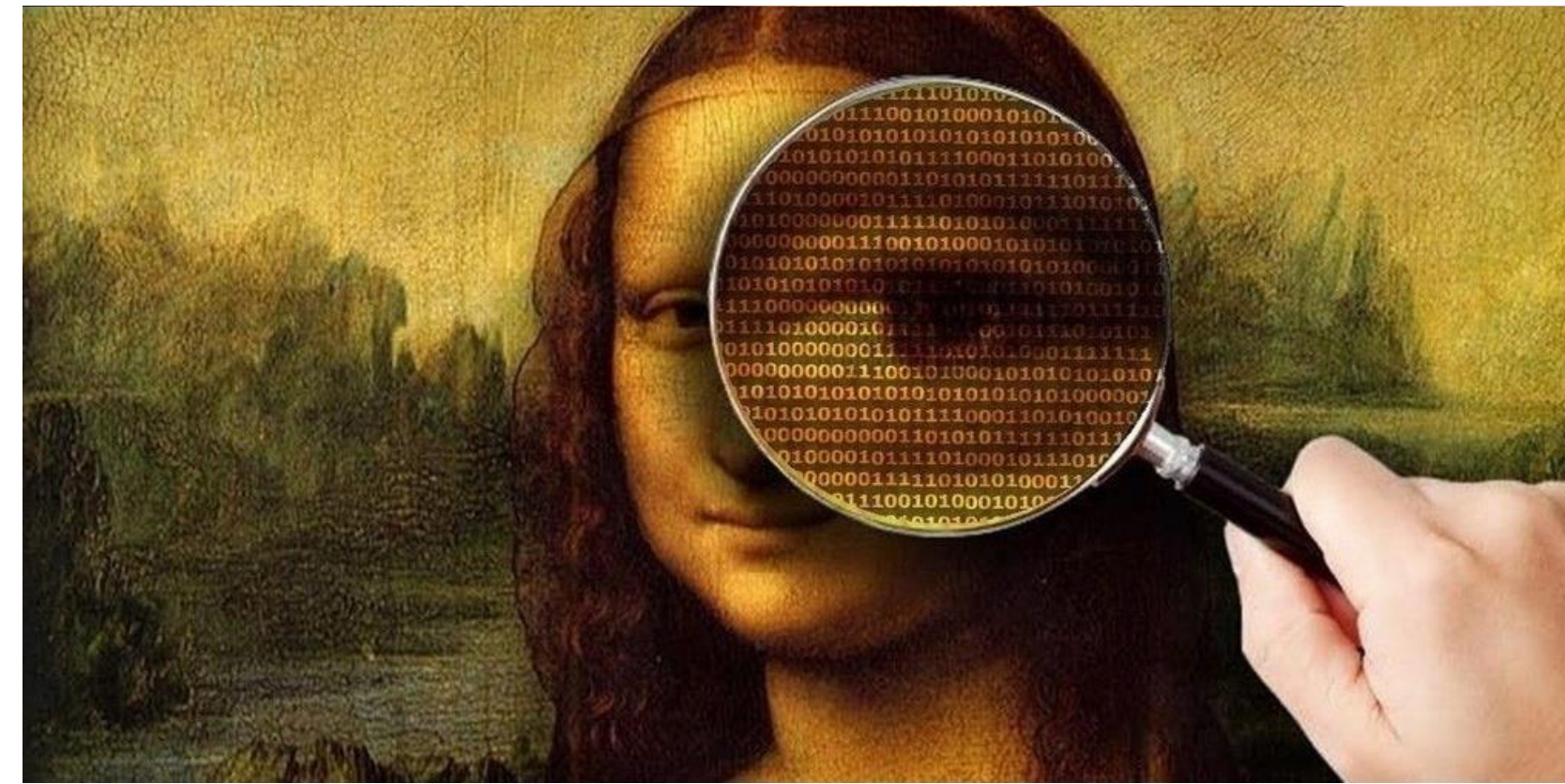


A CHALLENGE

**Before we start What
is Steganography ?**

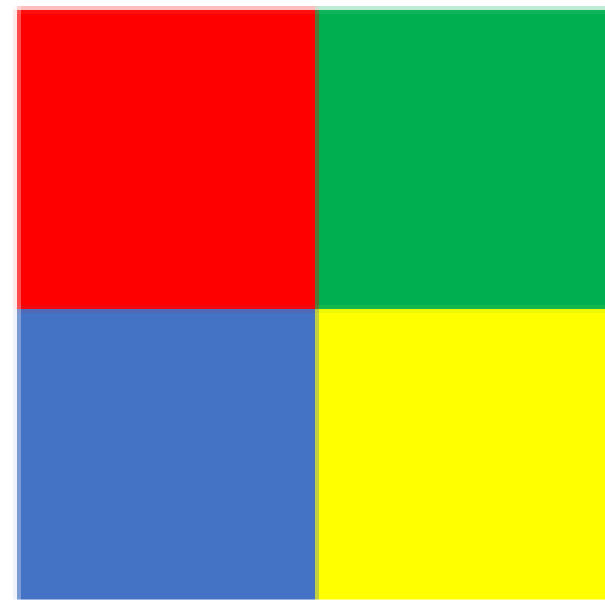
What is Steganography ?

Steganography is when you hide a encrypted data in, say, an image without anyone noticing it being there.



How Steganography Works ?





Original Image

11111111	00000000
00000000	11111111
00000000	00000000
00000000	11111111
00000000	11111111
11111111	00000000

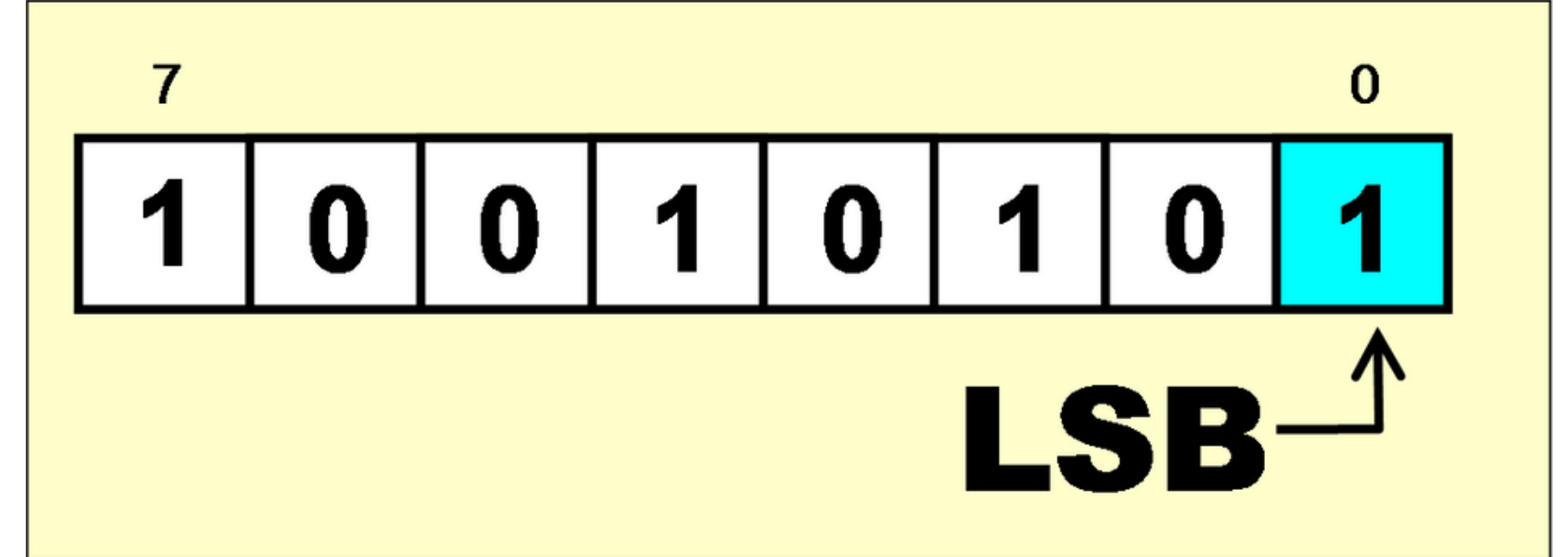


Stego Image

11111101	00000010
00000010	11111101
00000000	00000010
00000000	11111111
00000001	11111101
11111101	00000000



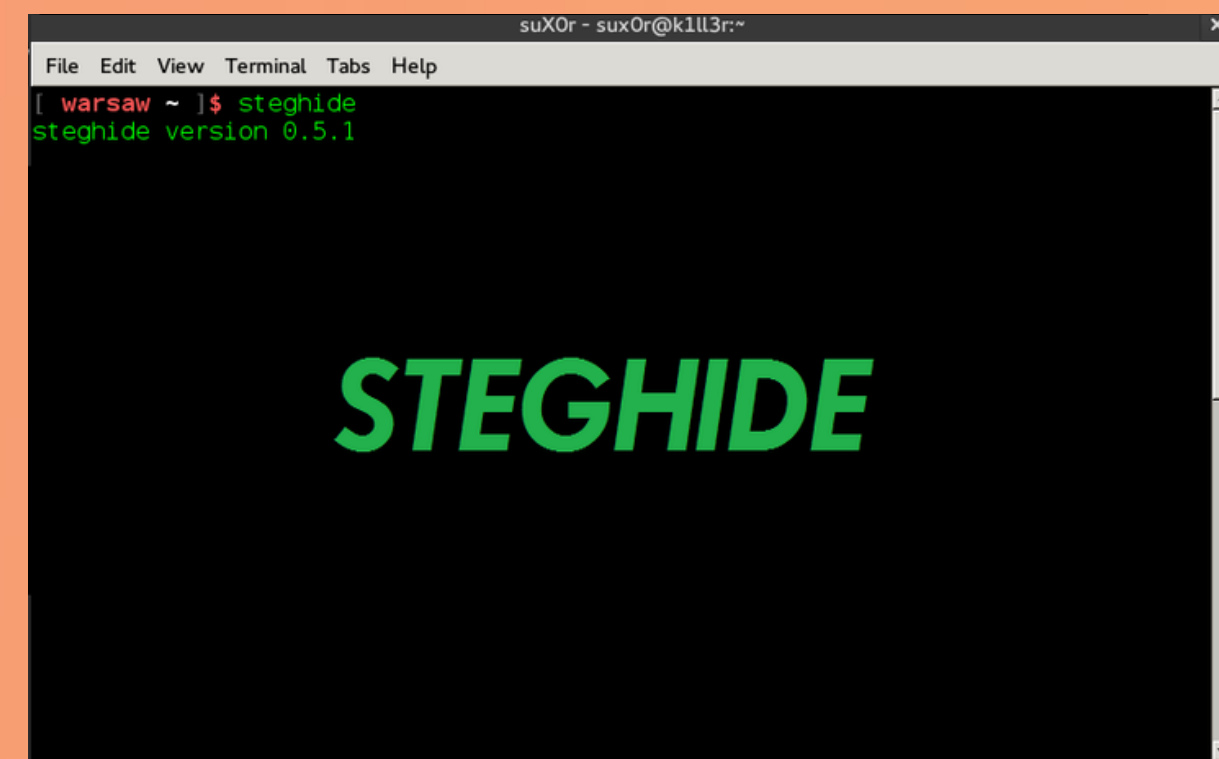
B	A	T
01100010	01100001	01110100



Tools for Embedding Messages



OPENSTEGO



STEGHIDE



```
CyberClub@kali:~$ steghide embed -cf mdk.jpg -ef msg.txt
```

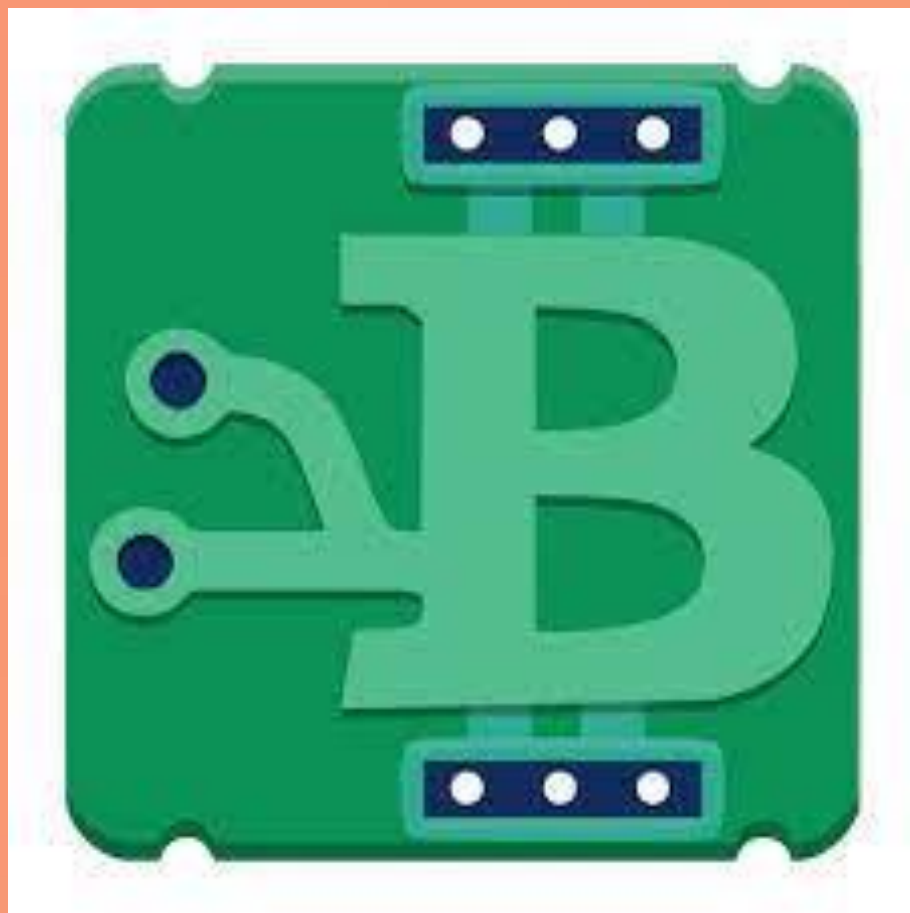
```
Enter passphrase:
```

```
Re-Enter passphrase:
```

```
embedding "msg.txt" in "mdk.jpeg" .. done
```



Detecting and Extracting Hidden Messages



BINWALK



STEGHIDE



#Steghide Tool

CyberClub@kali:~\$ steghide info mdk.jpeg

Enter-passphrase:

#binwalk Tool

CyberClub@kali:~\$ binwalk mdk.jpeg -e

#Stegseek Tool

CyberClub@kali:~\$ stegseek mdk.jpeg

[i] Found Passphrase : "123456"

[i] Original File name : "msg.txt"

[i] Extracting to : "mdk.jpeg.out"



CyberClub@kali:~\$ cat mdk.jpg.out

[i] "Ghadin Temchiw b3id inchallah"

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Challenge



“Amateurs hack systems;
professionals hack people.”

— Bruce Schneier



Thank You!