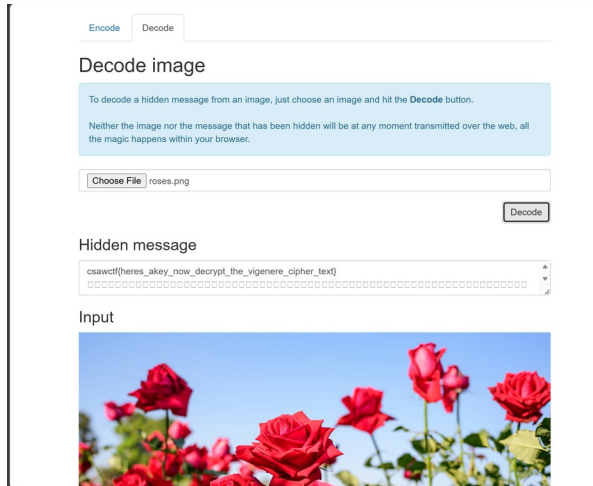


## Vigenere section

Key: found in roses.png

csawctf{heres\_akey\_now\_decrypt\_the\_vigenere\_cipher\_text}



The screenshot shows a web application with two tabs: 'Encode' and 'Decode'. The 'Decode' tab is active. Below the tabs, there is a section titled 'Decode image' with a light blue background. It contains a text box with the instruction: 'To decode a hidden message from an image, just choose an image and hit the Decode button. Neither the image nor the message that has been hidden will be at any moment transmitted over the web, all the magic happens within your browser.' Below this, there is a file input field with a 'Choose File' button and the text 'roses.png'. To the right of the file input is a 'Decode' button. Below the 'Decode image' section is a 'Hidden message' section with a text area containing the decoded message: 'csawctf{heres\_akey\_now\_decrypt\_the\_vigenere\_cipher\_text}'. At the bottom, there is an 'Input' section with a placeholder image of red roses.

Can be found by putting roses.png into [Steganography online](#)

Cipher text: found in hibiscus.png

ekasemk{oiik\_axiu\_xsu\_gieiwem\_moi\_nmivrxks\_tmklec\_ypxz}

Can be found by putting hibiscus.png into [Steganography online](#)

Plain text: The plain text was found by using the [Vigenere Cipher](#) key.

with the cipher and

PLANETCALC

Online calculators

Vigenère cipher

Tabula recta starts with

☒ ROT0 ("a" transforms to "a")
 ☐ ROT1 ("a" transforms to "b")

Text

ekasemk{oiijk\_axiu\_xsu\_gieiweu\_moi\_nmivryks\_tmklec\_vpxz}

Key

csawctf{heres\_akey\_now\_decrypt\_t

Transformation

☐ Encrypt
 ☒ Decrypt

English

CALCULATE

Transformed text

csawctf{heres\_anew\_key\_decrypt\_the\_secretto\_reveal\_flag}

This plain text reveals the xor key.

csawctf{heres\_anew\_key\_decrypt\_the\_secretto\_reveal\_flag}

This time, we're not telling them what kind of operation this key is used in. They have to figure out that this key is a xor key on their own.

They also need to figure out where exactly this 'secret' is and how it will reveal the flag.

## Xor section

To get the cipher text (aka secret) and figure out that the key is actually a xor key, you will need to look at the exif data in datavsmetadata.png. It has many hints.

xor key: csawctf{heres\_anew\_key\_decrypt\_the\_secretto\_reveal\_flag}

cipher text: 0 0 0 0 0 0 0 0 15 23 23 4 7 0 22 1 23 28 0 18 10 12 0 7 23 2 17 18 21 16 0 0 0 0 28 7 16 17 16 6 17 11 0 1 0 21 23 4 24 0 0 0 0 0

```

--(lanelle@lanelle)-[~/Downloads]
--$ exiftool datavsmetadata.png
ExifTool Version Number      : 12.07
File Name                    : datavsmetadata.png
Directory                    : .
File Size                    : 202 kB
File Modification Date/Time   : 2024:07:28 19:58:06-04:00
File Access Date/Time        : 2024:07:28 19:58:09-04:00
File Inode Change Date/Time   : 2024:07:28 19:58:06-04:00
File Permissions              : -rw-r--r--
File Type                    : PNG
File Type Extension          : png
MIME Type                    : image/png
Image Width                  : 1400
Image Height                 : 734
Bit Depth                    : 8
Color Type                   : RGB with Alpha
Compression                  : Deflate/inflate
Filter                       : Adaptive
Interlace                    : Noninterlaced
Pixels Per Unit X             : 2835
Pixels Per Unit Y            : 2835
Pixel Units                  : meters
Exif Byte Order              : Big-endian (Motorola, MM)
Orientation                  : Horizontal (normal)
X Resolution                  : 72
Y Resolution                  : 72
Resolution Unit              : inches
User Comment                 : Think about a two-input gate that outputs when inputs differ.
Exif Image Width             : 1400
Exif Image Height            : 734
XP Comment                   : Now that you know what operation is needed, have you found the right key?
Comment                      : Can you crack my secret? Here's a list of numbers: See what they reveal. 0 0 0 0 0 0 0 15 23 23 4 7 0 22 23 29 25 0 18 10 12 0 7 23 2 17 18 21 16 0 0 0 0 0 28 7 16 17 16 6 17 11 0 1 0 21 23 4 24 0 0 0 0 0
Image Size                   : 1400x734
Megapixels                   : 1.0

--(lanelle@lanelle)-[~/Downloads]

```

flag:

csawctf{great\_work\_you\_cracked\_the\_obscured\_secret\_flag}