

राक्षवाCTF

CHALLENGE NAME: [The Encrypted Canvas]

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CATEGORY: [Digital
Forensics]

LEVEL: [MEDIUM]



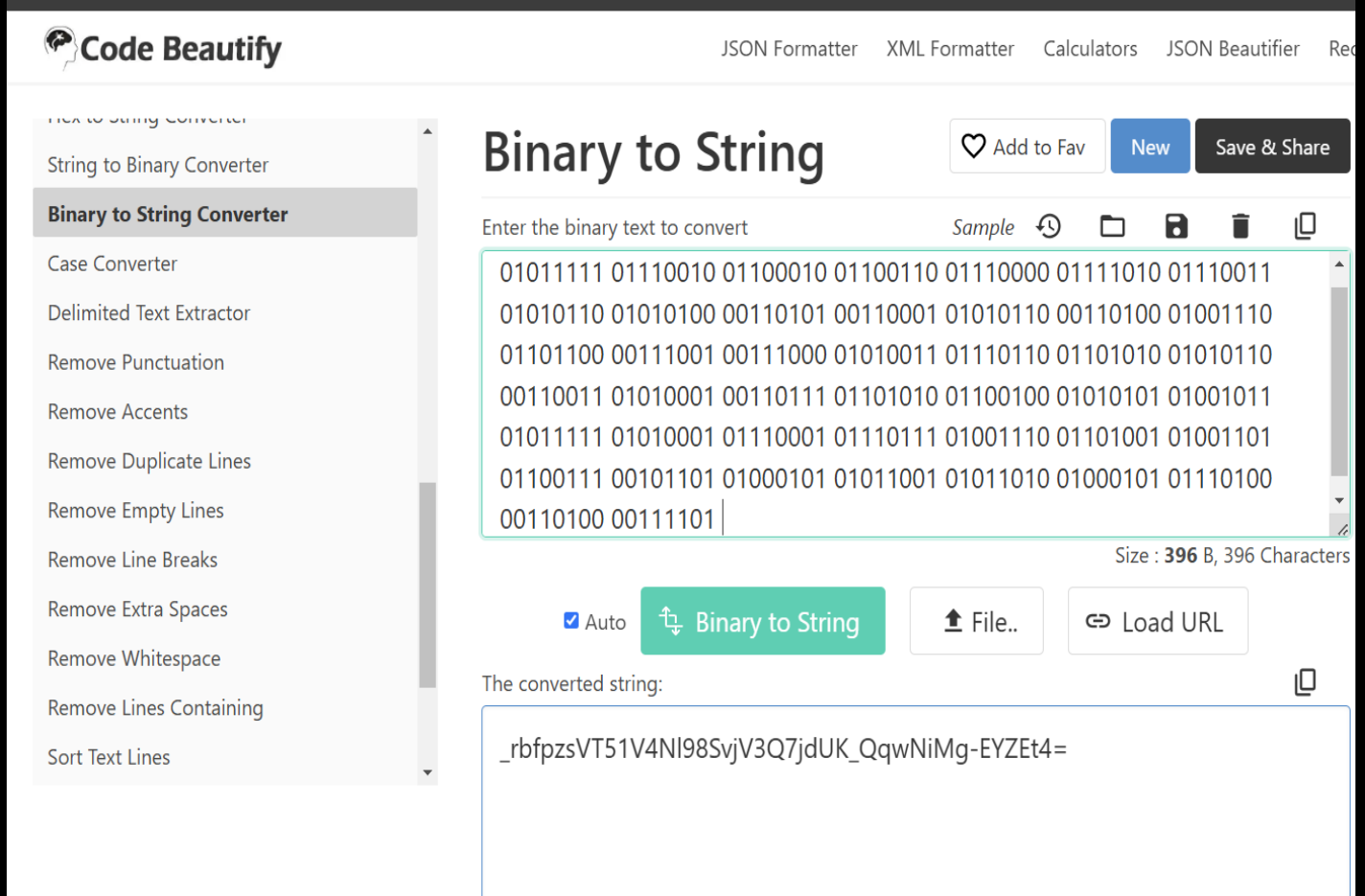
2025

Challenge Description:

A mysterious artist has concealed their masterpiece, leaving behind an encrypted file. The key to unlocking it is hidden in plain sight, waiting to be discovered. Can you unveil the hidden masterpiece and extract the flag?

Solution:

Converting the binary string given in keysecret file to string.



The screenshot shows the 'Code Beautify' website's 'Binary to String' converter. The left sidebar lists various tools, with 'Binary to String Converter' selected. The main area has a title 'Binary to String' and a 'Sample' button. Below the title is a text input field containing a long binary string. To the right of the input field, it says 'Size : 396 B, 396 Characters'. Below the input field are three buttons: 'Auto' (checked), 'Binary to String' (highlighted in green), and 'File..'. To the right of these buttons is a 'Load URL' button. Below the buttons is a section titled 'The converted string:' with a text output field containing the string: '_rbfpzsVT51V4NI98SvjV3Q7jdUK_QqwNiMg-EYZEt4='.

Decrypting the given encrypted file using fernet to get the gif



```
from cryptography.fernet import Fernet

key = b'_rbfpzsVT51V4Nl98SvjV3Q7jdUK_QqwNiMg-EYZEt4='
cipher = Fernet(key)
from google.colab import files
uploaded = files.upload()

encrypted_file_name = list(uploaded.keys())[0]
with open(encrypted_file_name, "rb") as encrypted_file:
    encrypted_data = encrypted_file.read()




decrypted_data = cipher.decrypt(encrypted_data)
decrypted_file_name = "decrypted_file.gif"
with open(decrypted_file_name, "wb") as decrypted_file:
    decrypted_file.write(decrypted_data)

print(f"Decrypted file saved as: {decrypted_file_name}")
```

Download the gif

```
[ ] files.download(decrypted_file_name)
```

The GIF must be split (e.g. using <https://ezgif.com/split>) and then each frame must be merged in the same final image, ignoring white background.



VISHWACTF{FLIGHTBA6K}



Flag: VishwaCtf{FLIGHTBA6K}