These writeups, authored by Peyton Braun, are designed to guide you through the process of solving all the challenges from the Inaugural University of Wisconsin – Stout Cybersecurity Capture the Flag (CTF) event.

This event was hosted by UW-Stout CyROC x CCDL

I hope these writeups help you gain a deeper understanding of each challenge and how to overcome them.

CTF Challenge Writeups

Each writeup will cover the following aspects of the challenge:

1. **Challenge Overview**: A brief description of the challenge.
2. **Steps to Solve**: Detailed steps, tools used, and reasoning behind each step.
3. **Tools and Methods**: Explanation of why specific tools and methods were chosen.
4. **How It Works**: Insight into the underlying concepts and the thinking process.

Challenge: "V"

Challenge Overview:

Decode a Vigenère cipher using the Giovan alphabet and password "GIOVAN".

Steps to Solve:

1. Obtain the encoded flag:
    - YBCPTPZN{EaT8CK2zVexEqjdCmP6URd14xW6kNg7B}.
2. Use a Vigenère cipher decoding tool, such as dCode.
    - Go to https://www.dcode.fr/vigenere-cipher
    - Input the encoded flag.
    - Set the key to "GIOVAN".
    - Ensure the alphabet is set to the standard English alphabet:
        1. ABCDEFGHIJKLMNOPQRSTUVWXYZ.
3. Run the decryption process.
4. Retrieved flag:
    - STOUTCTF{QfT8PE2rHjxRkbpHmC6OJp14cW6xHy7N}.

Tools and Methods:

- **dCode**: Provides a user-friendly interface for solving classical ciphers like Vigenère.

How It Works:

The Vigenère cipher encrypts text by shifting each character according to a repeating keyword. Decryption reverses this by shifting characters back using the same keyword.