QUESTION 1

Output

Caesar Cipher Encryption

Enter Plaintext:

Enter text to encrypt...

Encrypt:
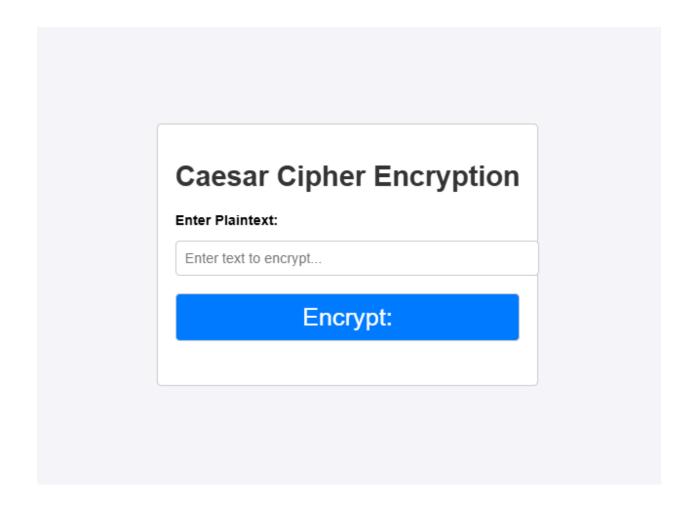
STEPS:

Step1:

. Input Collection (HTML)

- Creating the user interface with:

    o A text input field where the user enters the plaintext.

    o A button to trigger the encryption process.

    o A display area to show the encrypted text.

Step2:

JavaScript Logic for Encryption

- When the button is clicked:

    1. Read Input:

        - Get the plaintext from the input field and convert it to uppercase for consistency.

        - **Iterate Over Each Character:**

        - Check if the character is a letter.
        - Use the Caesar cipher formula to shift the letter by $n=7n = 7n=7$:
          Encrypted Character=(ASCII value of letter−65+n)mod 26+65\text{Encrypted Character} = \left(\text{ASCII value of letter} - 65 + n \right) \mod 26 + 65Encrypted Character=(ASCII value of letter−65+n)mod26+65
            - This formula works for uppercase letters ('A' to 'Z'), where 65 is the ASCII code for 'A'.
        - Leave non-alphabetic characters (like spaces or punctuation) unchanged.
    2. **Store the Result:**
        - Append each encrypted character to a result string.
    3. **Display the Result:**

- Show the final encrypted text in the designated output area.