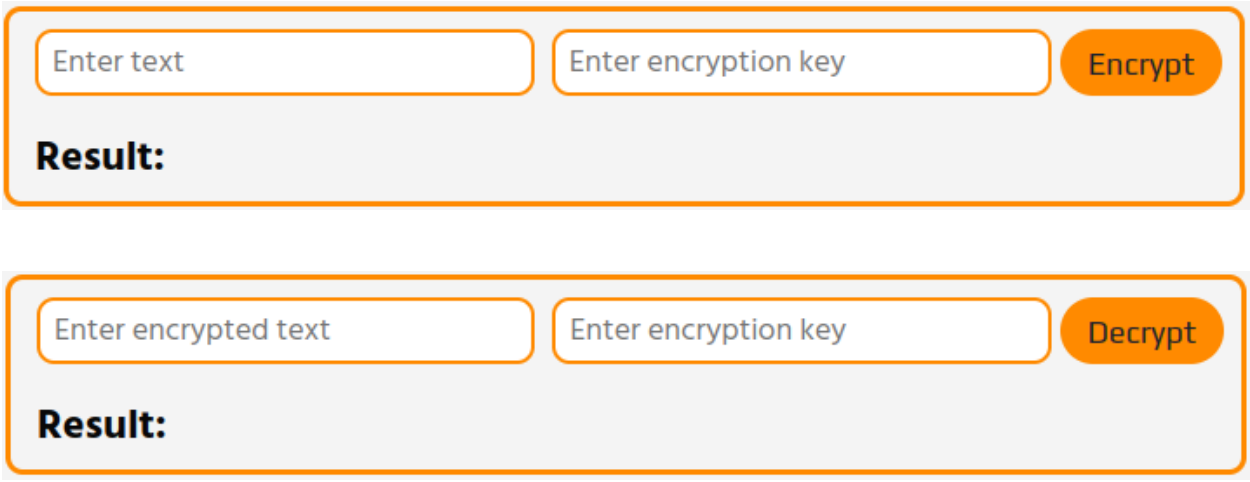
CAESAR CIPHER

Design 1



Note: These designs are for insight. You can use/modify any if you want or find another.

Description: **Caesar Cipher** is a simple encryption technique where each letter in the plaintext is shifted by a fixed number of positions down the alphabet.

EXAMPLES

1. **Plain text:** cat **Key:** 2 **Result:** ecv

   Explanation: cat is the plain text and **2** is the key. If we shift "c" two letters down, we get "e", if we shift "a" two letters down, we get "c", and if we shift "t" two letter down, we get "v" leaving us with "ecv" for "cat" as plain text and two(2) as key

2. **Plain text:** hello html5 **Key:** 5 **Result:** mjqqt myrq5
   Explanation: Similar example as #1 but with two words. Notice that the space between the words and the number five(5) were not encrypted

3. **Plain text:** x-ray **Key:** 18 **Result:** p-jsq
   Explanation: Notice how "x" was shifted 18 times. When you shift down twice, you will get "z". Given that "z" is the last letter, we restart the counting from "a" and "p" is at position 16

INSTRUCTION

1. Create a repo called “**caesar-cipher**” in your GitHub account
2. Clone the repo to your machine
3. Create the following files in the cloned repo: **index.html**, **style.css**, & **script.js** and link them
4. Create a function called **encrypt** that takes two parameters “**text**” and “**key**”. The **key** should be a number. This function when called, should return the encrypted text based on the **key**.
5. Create a function called **decrypt** that takes two parameters “**text**” and “**key**”. The **key** should be a number. This function when called, should return the decrypted text based on the **key**.
6. The key must be between 1 - 25
7. Design your project
8. Test and make sure it’s working
9. **Push** the project to GitHub, create a **GitHub page**, and share the link in the group

TIPS

Encryption:

- For each letter in the plaintext, shift it forward in the alphabet by the fixed key
- Go back to the beginning of the alphabet if the shift goes beyond 'Z' (for uppercase) or 'z' (for lowercase)
- Non-alphabetic characters should remain unchanged

Decryption:

- To decrypt, shift each letter in the ciphertext backward in the alphabet by the fixed key
- Go back to the end of the alphabet if the shift goes before 'A' (for uppercase) or 'a' (for lowercase)
- Non-alphabetic characters remain unchanged

OUTCOME

This project will help you achieve the following:

- Under how to use ASCII and Unicode
    - https://www.w3schools.com/jsref/jsref_charcodeat.asp
    - https://www.w3schools.com/charsets/ref_html_ascii.asp
- Get more familiar with DOM manipulation

- Do more practice with EventListeners
- Do more practice with conditionals
- Using strings and string methods
- Using built-in JS functions and methods: charCodeAt(), charCode()
- Do more practice with function parameters