Caesar Cipher Encryption Report

Introduction:
The Caesar Cipher is one of the oldest and simplest encryption methods. It works by shifting each letter in the message by a set number of positions in the alphabet. In this example, we use JavaScript to implement this encryption, where users can enter a message and a shift value to encrypt their text.

How the Code Works:

- HTML Structure: The page features a button labeled "Encrypt Text." When clicked, it starts the encryption process.

- caesarEncrypt(plaintext, shift): This function is the main part of the encryption. It takes the message (plaintext) and the shift value, converts each character into its ASCII code, applies the shift (using modulo 256 for all characters), and creates the encrypted of the text.

- runCipher(): This function is activated when the user clicks the button. It asks the user to input the message and the shift value, then uses the caesarEncrypt() function to create the encrypted text and displays the result.

- After click on the "Encrypt Text", "The user is requested to enter both the message and the shift.". Once they provide these, the encrypted text is shown in a pop-up alert.

Result Example:
For instance, if you enter the message "MuhamadAbubakir" and set the shift to 5, the encrypted message would be "RzmfrfiFgzgfpnw."

The Code:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Caesar Cipher Encryption</title>
</head>
<body>
  <h2>Caesar Cipher Encryption</h2>
  <button onclick="runCipher()">Encrypt Text</button>

  <script>
    function caesarEncrypt(plaintext, shift) {
      let ciphertext = '';
      for (let i = 0; i < plaintext.length; i++) {
        let charCode = plaintext.charCodeAt(i);
        let shiftedCharCode = (charCode + shift) % 256;
        ciphertext += String.fromCharCode(shiftedCharCode);
      }
      return ciphertext;
    }

    function runCipher() {
      let plaintext = prompt("Enter the plaintext:");

      let shift = parseInt(prompt("Enter the shift value:"));
        if (isNaN(shift)) {
        alert("Invalid input! Please enter a number.");
        return;
    }

      let encryptedText = caesarEncrypt(plaintext, shift);
      alert("Encrypted ciphertext: " + encryptedText);
    }
  </script>
</body>
</html>
```