

## Web Application Development

### Assignment # 3 -Total Marks 100

#### Assignment: Text File Encryption and Decryption Web Application

In this assignment, you will create a web application using HTML, CSS, and JavaScript that allows users to read English text from a text file, encrypt or decrypt the content using a custom encryption or decryption method, and save the encrypted or decrypted message to a text file. The application should provide a user-friendly interface with file loading, saving, encryption, and decryption mechanisms.

#### Requirements:

##### 1. User Interface: [20 Marks]

- a) Create an HTML page with a user-friendly interface.
- b) Design and style the interface using CSS to make it visually appealing.
- c) Include a file input element to allow users to select a text file.
- d) Display the selected file's name on the interface.
- e) Provide buttons for encryption and decryption.
- f) Display the encrypted or decrypted text on the interface.
- g) Include a button to save the encrypted or decrypted text to a file.

##### 2. File Loading: [10 Mark]

- a) Implement JavaScript code to handle file loading.
- b) When a user selects a text file using the file input element, read the content of the file.
- c) Display the content of the file on the interface.

##### 3. Encryption: [30 Marks]

- a) Implement a **custom encryption method** using JavaScript.
- b) Write JavaScript code that takes the loaded text file content and encrypts it.
- c) Display the encrypted text on the interface.

##### 4. Decryption: [30 Marks]

- a) Implement a **custom decryption method** using JavaScript.
- b) Write JavaScript code that takes the loaded text file content and decrypts it.
- c) Display the decrypted text on the interface.

##### 5. Saving Encrypted or Decrypted Text: [10 Mark]

- a) Implement JavaScript code to handle saving the encrypted or decrypted text to a file.
- b) When the user clicks the save button, convert the encrypted or decrypted text into a downloadable file.
- c) Prompt the user to save the file with a chosen name.

#### Submission Guidelines:

1. Create a folder containing all the necessary HTML, CSS, and JavaScript files.
2. Include a README file with clear instructions on how to run the application.
3. Zip the folder and submit it for evaluation.

**Note:** The possibilities to create custom encryption and decryption methods are endless, hence **it is expected that your solution is unique.** You are encouraged to explore and use appropriate libraries to simplify the development process if desired.