Practical Assignment 0 (PA0)

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Course:	Network Security (CSE-537)

Practical Assignment 0

Write a program with a nice UI to Encipher / Decipher with the simple encryption algorithm discussed in the class.

Submit on the MS Teams platform as a single pdf containing:

a. Screenshots
b. Well commented Source-code
c. Github link where the code has been uploaded.

GitHub link (Source code): https://github.com/krashish8/netsec-assignments

Deployed (View Online!!): https://ashish-netsec.netlify.app/ [Alternate Link]

[P.T.O.]

Source Code (well-commented):

The complete source code for rendering the HTML and creating the UI can be found on the above GitHub repository.

The main JavaScript function for encoding/decoding is shown below:

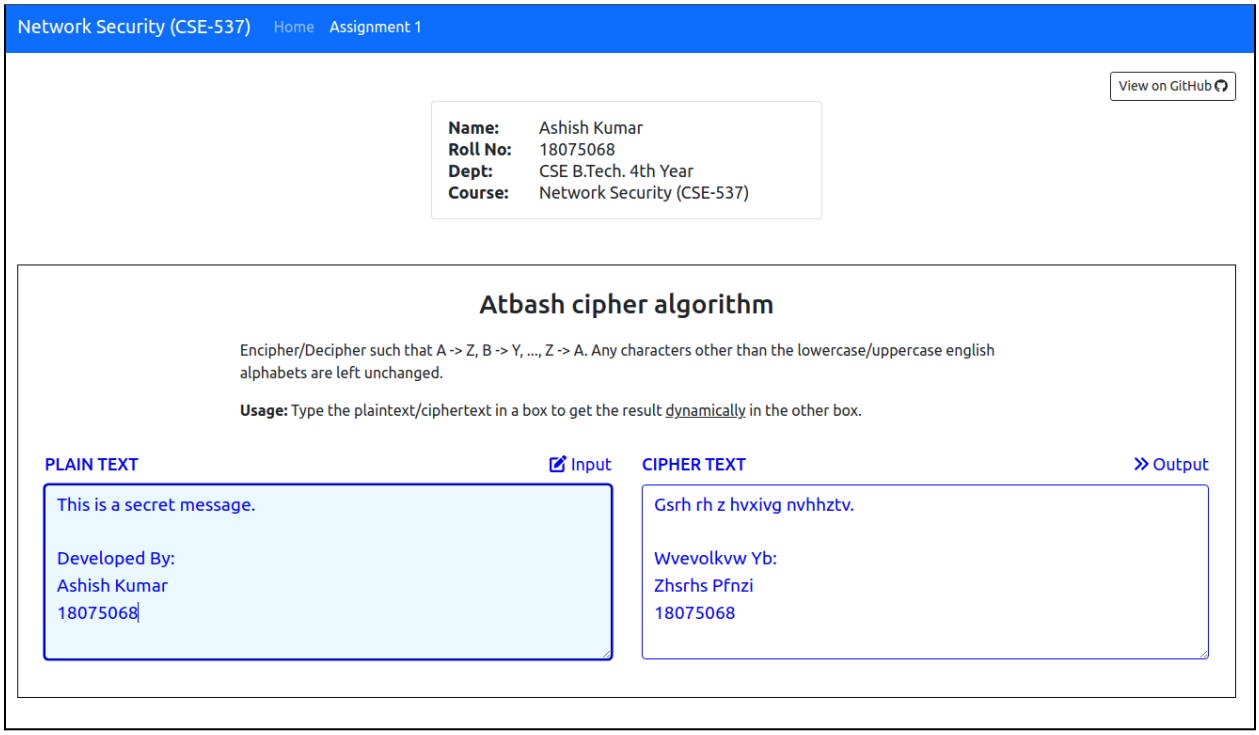
```
/**
 * The main cipher function:
 *
 * Encipher/Decipher the text such that: A -> Z, B -> Y, ..., Z -> A.
 * Any characters other than the lowercase/uppercase english alphabets
are left unchanged
 *
 * It is obvious that the same encoding algorithm can be used for
decoding the text.
 *
 * @param {String} input The input plaintext or ciphertext
 * @return {String}      The corresponding ciphertext or plaintext
 */
function encodeOrDecode(input) {
  var output = "";

  // Iterate through the input
  for (var i = 0; i < input.length; i++) {
    // Get the character and corresponding ASCII character code
    var char = input.charAt(i);
    var ascii = char.charCodeAt();

    // Append to the output, depending on whether it is
lowercase/uppercase
    if (char >= "a" && char <= "z") {
      output += String.fromCharCode(
        "a".charCodeAt() + ("z".charCodeAt() - ascii)
      );
    } else if (char >= "A" && char <= "Z") {
      output += String.fromCharCode(
        "A".charCodeAt() + ("Z".charCodeAt() - ascii)
      );
    } else {
      // If character is not an alphabet, then the output is unchanged
      output += char;
    }
  }
  return output;
}
```

Screenshots:

For encryption:



For decryption: (The same algorithm can be used for encryption/decryption)