

Coursework Report

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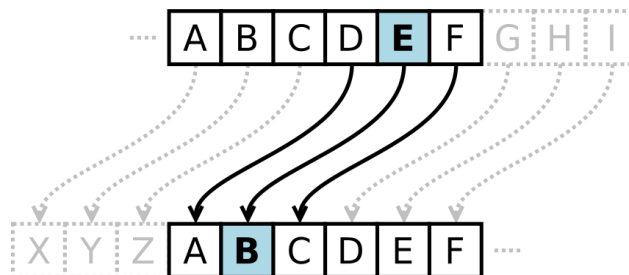
Edinburgh Napier University - Web Tech (SET08101)

Abstract

This report is talking about the coursework that I have done which base on the course Web Technology. In this report, it shows all the element of my project and also the background study of this coursework such as Introduction, Code Listing, Math, Software Design, Implementation, Critical evaluation of my implementation and Personal evaluation.

1. Introduction

Right now, there are literally hundreds of useful web technologies available, with more being created and released each day. For this assignment, it will require to do research and design a website base on different kind of cipher and write a report base on the website that I have done. Before started the assignment, there are different kind of cipher that have been found such as Caesar cipher, Vigenère cipher and others. In the assignment, the type of cipher that have been use are Caesar cipher and Vigenère cipher. **Referencing [1]**For Caesar cipher, it also known as a shift cipher, is one of the oldest and simplest forms of encrypting a message. It is a type of substitution cipher where each letter in the original message is replaced with a letter corresponding to a certain number of letters shifted up or down in the alphabet.



2. Software Design

Before starting the assignment, there are a lot of research had been done such as find some example of the assignment that going to work out, and also find different kind of cipher. At the end Caesar cipher and Vigenère cipher had been choose for this assignment.

3. Math

Caesar cipher:The encryption can also be represented using [modular arithmetic](#) by first transforming the letters into numbers, according to the scheme, $A \rightarrow 0, B \rightarrow 1, \dots, Z \rightarrow$

25.[2] Encryption of a letter x by a shift n can be described mathematically as

$$E_n(x) = (x + n) \bmod 26$$

Decryption is performed similarly,

$$D_n(x) = (x - n) \bmod 26$$

Vigenère cipher :Vigenère can also be described algebraically. If the letters $A-Z$ are taken to be the numbers $0-25$ and addition is performed [modulo](#) 26, then Vigenère encryption E using the key K can be written,

$$C_i = E_K(M_i) = (M_i + K_i) \bmod 26$$

and decryption D using the key K

$$M_i = D_K(C_i) = (C_i - K_i) \bmod 26$$

4. Implementation

this is the first time I have a touch on HTML, CSS and also JavaScript. This website is the first project since I study in this university. This website is very simple but all the functions are fully included. This website is talking about different kind of cipher and how to use HTML and CSS to write a website.

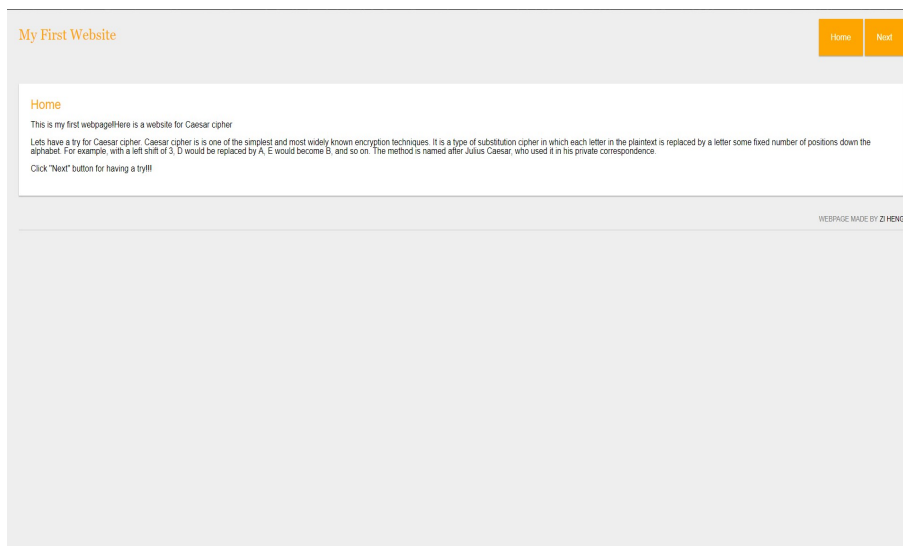
5. Critical evaluation of my implementation

In this application, there are a lot of improvement that can me work out because I am not an expert of writing a website and also this is the first time I write a website. There are a lot of improvement can be done such as can add some picture to the website so that it can attract the user much more and also use some attractive color to make the site more attractive. The layout of the site also can better by finding some more example of the application that have been done by other people for reference.

6. Personal evaluation

For me, I have learn a lot of things when doing this assignment and also faced a lot of challenge on it. The first challenge that meet by me is I do not know how to write a website by maxing all HTML, CSS and JavaScript together and I have not learn before, so this make me stack at the beginning when I want to conduct this assignment.in this assignment I think I have miss out the outlook of the website I just do a very simple website and do not make it look nicer, I think that is what I have miss out.

7. Software Screen Shot



Text

THE QUICK BROWN FOX JUMPED OVER THE LAZY DOG.

Shift

Text

THE QUICK BROWN FOX JUMPS OVER THE LAZY DOG.

Key

XS