

Web Technologies Report

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1 Introduction

This coursework purpose consist in creating ciphers to encrypt a message from the user and converting it into an encrypted message, as well as decrypting the message along the same output interface using a HTML website as the GUI. The two ciphers chosen were Caesar cipher which consists on shifting the letters of a message to create scrambled messages. This cipher include a decryptor to check that the message will be fully decoded. The second ciphers is a symbol and number encryptor, creating a message using numbers and symbols. The cipher includes a decoder to check the message will be fully decoded.

2 Software Design

In order to create this project to be user friendly and simple, colors and graphics were kept to a minimum, facilitating the readers sight. To keep it simple, the idea is to create an index page as the main page, displaying three buttons that will direct to the ciphers pages and one button that will link to the design page. The main page will use only a brief description of what the website includes and one one image is displayed in the center of the page. The two ciphers pages will be similar, having a title and description, a user input box and two outputs to display the encoded and decoded message. All of the pages will refer back to the main page selection. Using a non-bright background to enhance the content at the center of the page will help the users to quickly read the output and using a mild hue for the buttons to keep the text readable. The design page contains a diagram of the website, showing what tags every page has. This is required for future uses if another developer will need to change the content of this project. A css file will handle all the layout, that can be centered images, color background and titles. The javascript code is executed within a html page to create a user friendly interface.

3 Implementation

The website was created as the main index page as shown on image 1, in which there are three options to access the two ciphers as well as the graphics page.

The second screenshot displays the cipher page, the colors and how the users will interact with the page.

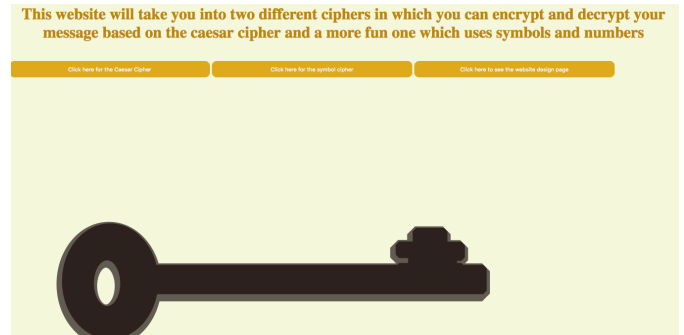


Figure 1: Screenshot index page

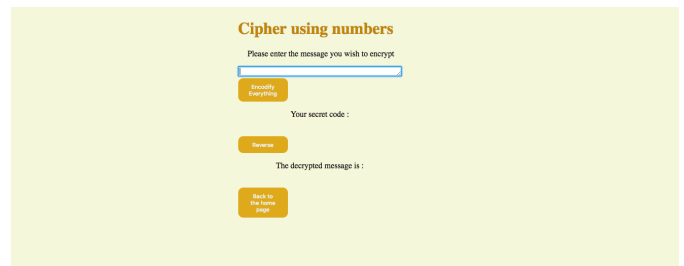


Figure 2: Screenshot cipher page

4 Critical Evaluation

This website uses a very simple interface that uses a limited number of objects and text to simplify the usage. The main opening page is very basic but explains well and how to reach the ciphers. The colors used are very easy for the eyes and all texts and buttons text are properly highlighted, so the content can be read in all lighting conditions as well as the evening. The input boxes are centered and away from any distractions, with the encoded message right under the text box. The first cipher links directly to the second symbol cipher, and from this last page a button can take directly into the home page again. The design page is only accessible from the main menu as this will be of most use for future updates made by developers. The design page only links to the main page, so a user cannot be distracted or confused by the workflow photo. The requirements set for this project were met, creating the three main html files, associating a css layout to manage the position and colors of the objects within all pages. The user can navigate around the website without excessive visual clutter.

5 Personal Evaluation

Overall this project was a simple one, I personally found it challenging, as the second cipher I was working on would not behave appropriately, omitting some simple words, while the rest was working fine. A big challenge was choosing colors that would be appropriate and would not create a contrast, that can cause eye strain and the consequences of not being able to see the text very well. Also having a slight issue distinguishing certain colors, I built the GUI to easily be able to read the text, and ease the colors of the website to not confuse the eyes during the browsing. These light colors are ideal to people who might struggle to see colors and bright colors were avoided so text would not blend with the hues used. Some help was found on stackoverflow (reference at the end) in which some negative numbers on the symbols cipher would not match.

References

<https://stackoverflow.com/questions/4467539/javascript-modulo-gives-a-negative-result-for-negative-numbers/4467559>