

Coursework Assessment 1- Web Technologies **SET80101**

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I. Introduction

The aim of this coursework is to design and implement a website that enables your user to encode simple text messages using at least two different classical cyphers. The content of this coursework will include the following pages: Index, coding pages and coursework specification. I decided to implement the cipher Base64 because I am familiar with and the coding methods suggested in the specifications of the coursework, which is Morse.

II. Software Design

The approach of implementation

In order to create basic features of the website we are going to use:

- HTML for the creation of content such as dropdown, headings, button, checkboxes...
- CSS will be used to make the website prettier with colours, choose fonts and effects.
- JavaScript will be used to allow most of the functionality that we can find for ciphers and code methods.

List of requirement

- The design of the website will be consistent through pages such as the navigation bar, the background, colours...
- Each page will have a heading that will help the user to know where he is. A navigation bar at the top in order to changes pages easily with the dropdown. A footer in all pages including the author of the website.
- Navigation bar will have different colours when the user hovers over a section. Dropdown and button will have different colours when the user hovers over.
- Grey and black colours to match the visual of the website (avoid contrast).
- Text will be visible in each page with the same colour and font.

Cipher and encode methods

- One cipher will be implemented: Base64.
- Morse Encoder/Decoder will be implemented.

Sketches of the layout

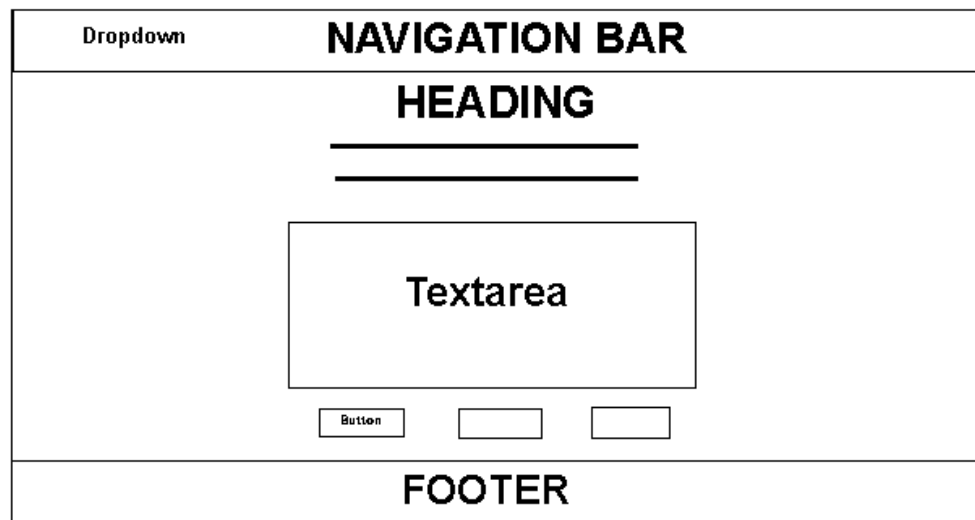


Figure 1. Cipher page

III. Implementation

The website contain a navigation, colour, button requirements. You will find a navigation bar on every page to navigate easily through pages you can also find footer at the bottom to show the author and the date for the coursework.

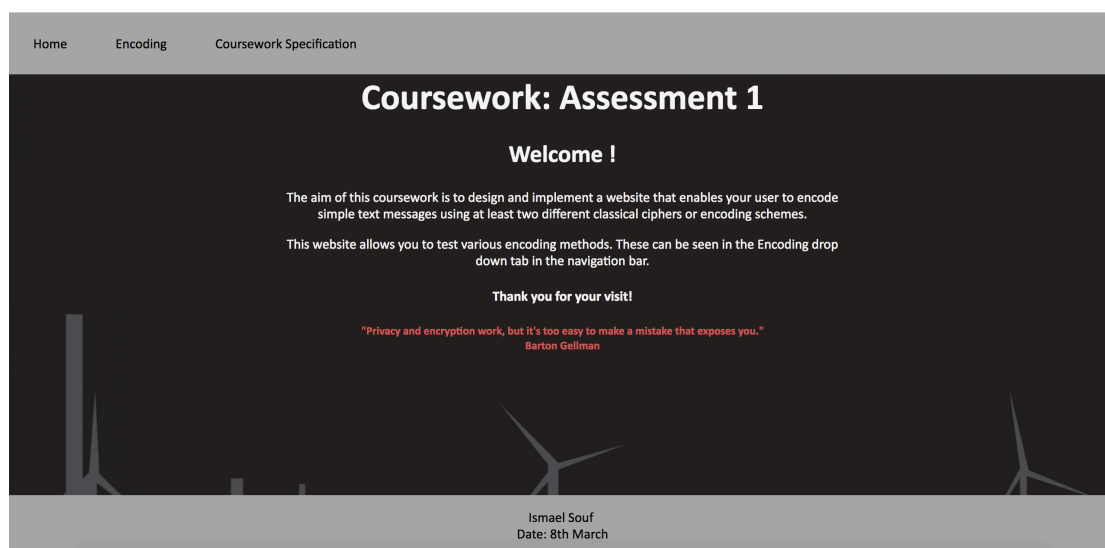


Figure 2. Index page

Navigation Bar: Situated at the top of the page in order to be the first thing to see. When you hover over items the colour will change to make an effect. It can be useful to know which button is about to be clicked or selected.



Figure 3. Navigation Bar

A dropdown has been added in the navigation bar as suggested in coursework specification, I decided to make the navigation simple to use but efficient.

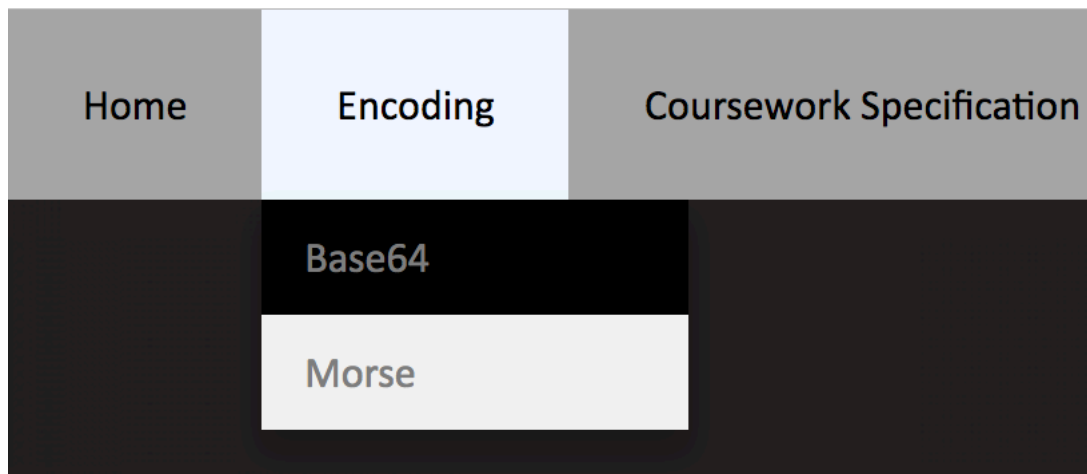


Figure 4. Simple dropdown with color effect.

There is an option to upload or drag file in the base64 page, basically you can add a file in order to be encoded and then decoded by pressing the appropriate button.

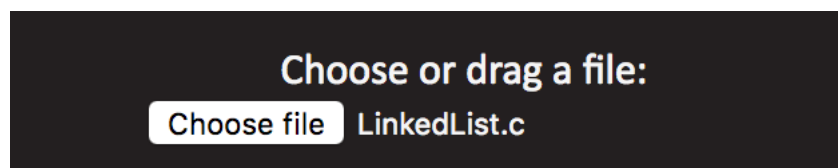


Figure 5. Function to choose or drag a file. (C file selected to be encoded)

IV. Critical Evaluation

The list of requirements set out in the coursework specification has been completed and features added:

- Implementation of two encoding methods
- 2 Encipher and decipher messages
- Encode files
- Colours with no contrast, and text visible
- Pages organized with dropdown
- Navigation bar that allow navigating through pages.
- Footer
- Colour's effect
- Brief description of the cipher

Possible improvements to your application

- Add more ciphers to the website
- Images
- WebAudio API for Morse
- Mobile version of the website
- Test a server side
- Keep rot13 as an example
- More features such as animations

V. Personal evaluation

Reflecting on what you learned

In this coursework I learned how to pursue my own path in studies. I used to follow lectures and practical until I started the coursework. Now I am able to build my own website with JavaScript, CSS and HTML , buttons. Moreover I learned how to deal properly with features such as dropdown, drag or chose file and change colours of items when hover over.

Challenges you faced

At first glance I was really confused about JavaScript, I excepted it to be like Java but I was wrong. I had no experience in website until I start this module. I was very far behind those who have experience in HTML, CSS and JavaScript. It was a real challenge to go through books, websites and videos in order to fill the gap even though I'm not yet a web designer. I also found CSS tricky because of many things we use. I didn't know where to start or even what to start but through the hard working I think I did a great job.

Methods you used to overcome challenges

In order to overcome my challenges I decided to follow the plan o and spend some times going through videos online. They were really helpful and gave me basic ideas on what to do. I have done most of the challenges in the practical even though I didn't complete them. I didn't want to rush the coursework so I made a plan for myself to spend one or two hours per day until I get ideas of what kind of website I would build. And I realised that navigation bar is something I really like on a website because it make the web more easier to navigate. I found on YouTube many videos and used w3school in order to fulfil my ideas.

Performed

I think for someone who didn't have any knowledge on how to design a website I made the right choice by starting immediately when the coursework was out. I don't like being left behind but that will always happen because we learn constantly. I spent time on the coursework but also had a lot of free time I managed to make a plan that I could follow.

VI. Reference

Books recommended:

- Introducing Web Development
- Beginning Responsive Web Design with HTML 5 and CSS3
- JavaScript Quick Syntax Reference

YouTube:

- Tutorial CSS: How to Create an HTML Dropdown Menu
- Tutorial JavaScript: JavaScript with DerekBanas

W3school:

- HTML, CSS

Stack Overflow:

- Drag file