 

**Informatics Institute of Technology**

**Department of Computing**

BSc Computer Science

**Module: 4COSC0011C Web Design & Development Module Leader: Ms. Janani Harischandra**

**Group Coursework Report**

Tutorial Group : SE/CS Group B

Coursework Group No :

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# **1. Introduction**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **UoW ID** | **IIT ID** | **Student Role** |
| Akassharjun Shanmugarjah | W1742307 | 2018387 | 1 |
| Dinuka Piyadigama |  |  | 2 |
| Yuwarajahlingam Dinesh |  |  | 3 |
| Visal Rajapakse | W1742117 | 2018418 | 4 |

Our topic was creating a website for a Superhero Theme Park combined with Marvel & DC comics characters.

# **2. Technical Discussion**

Discuss the development of the tasks that you were allocated. This technical discussion must include the approach taken, and explanations of how the required functionality was implemented. Illustrate your explanation with code snippets and screenshots. Also explain the difficulties you faced and how you solved them.

Illustrate your technical discussion with screenshots and code samples.

*Max 500 words*

## 2.1 Presentation Page

The first task assigned to me was to create a page to present my group members and then load the main page after 4 seconds. I knew at once that to implement the said feature I would have to use JavaScript. Therefore I researched how to do this and came up with the code below to redirect to the main page after 4 seconds.

Diagram here.

## 2.2 Font Size Change

The second task assigned to me was to create the functionality to increase / decrease the font size used on the website. I knew that this task required JavaScript as well. It was quite easy because all I had to do was retrieve the current font size from the body of the HTML page using the Document Object Model (DOM) and increase it by 0.05em. I also tested this feature and it seemed to me that 1.25em was the maximum size the font could get large without rendering the website’s content useless. I also concluded that 0.75em will be the minimum size because anything smaller than that seemed unreadable.

## 

## 2.3 Buy Products Page

The third task assigned to me was to create a page to purchase products related to our theme, with a form. In order to validate the details in the form I had to use JavaScript because of the coursework specification. I wrote my own logic in JavaScript to handle the products quantity and the total price.

Task 5 assigned to Student 1 required me to create a page with a form, where the user may

select a one or more products of which they would choose to buy. Several stipulations were

also given as to the requirements of the purchase in the coursework specification.

Approaching this task required primarily relied on using JavaScript form validation

alongside an algorithm implemented within the JavaScript file. For the form used in the

HTML file, simple checkboxes, select dropdowns, buttons and input boxes were used.

## 2.4 CV

One of the common tasks assigned to all the students

# **3. Discussion of UI and application of UX principles**

Explain how you met the following UX principles to achieve a good aesthetical result, appealing to the target audience of the web site, with good visual balance between all the UI elements (background, header, footer, text, borders, graphics etc.), making content legible, clear and discoverable.

Illustrate each of your discussion with screenshots and code samples.

*Max 1000 words*

## 3.1 Information architecture

### a. Design

|  |
| --- |
| Explain how you structured the web site (the organization of the web site folders) and how you designed the web site navigation to ensure that content is discoverable, that users are aware at any time of their position (use of breadcrumb or breadcrumb trail) on the web site and they can easily (with the minimum number of steps) to jump to different sections of the web site. Did you consider how you can assist the users to search for content?  How did you implement the web site navigation system? Provide relevant HTML & CSS code. |
| How do you structure each page to direct the user to content (when multiple pages use the same style you need to explain only the template that those pages follow)? Do you differentiate the importance of content (e.g. primary, footnotes)? |

### b. Code to achieve good Information architecture

For example the template created for your individual pages and for navigation.

## 3.2 Color balance/composition/graphics/consistency

### a. Design

Explain the color combination, the composition (visual structural elements) and graphics (images, logo, icons) you used to ensure the proposed web site is appealing for its purpose, it reveals its’ identify and complies with the brand.

good aesthetical result such as good visual balance between all the UI elements (background, header, footer, text, borders etc.) and also ensure good legibility of the web site.

### b. Code to achieve good color balance & ensure consistency

## 3.3 Typography / consistency

### a. Design

What CSS did you write to ensure good and consistent color balance  
What HTML code you wrote to structure your we site in order to ensure good and consistent composition Did you write any CSS to consistently format the appearance of graphics?

Explain the fonts, font sizes, colors and styles you used to ensure the proposed web site is appealing and suitable for its purpose and at the same time legible. Explain how you ensured content relevance and consistency (e.g. paragraph titles, subtitles, text, small font).

### b. Code to achieve good typography / consistency

What CSS you created to modify text.  
Did you use any of the online tools to test the legibility of your web site? What were the test results? How did you write the CSS to ensure consistency?

## 3.4 Gestalt principles grouping

|  |
| --- |
| How did you apply the Gestalt principles of grouping to reveal the purpose of the content, to direct the user |
| to content and to increase the legibility of your web site? Use screenshots of your page to better support your justification.  E.g. for the example below you could write something like that: |
| In the above example **proximity** that states that "objects or shapes that are close to one another appear to form |
| groups” has been applied in the following elements: |

o aligning the title, textual description for each stamp and rating star graphics close to each other creates a group, aligning this group of elements next to the stamp graphic creates a relation of the description to the stamp. Similarly aligning the favourite, rating and add to basket icons close to each other makes them a group. Aligning the stamp (blue box), the description (grey box), and icons (orange box) next to each other creates a relevance between those elements.

o leaving space vertically between each stamp, description and icons box separates the stamps, their description and the icons to interact with each stamp respectively.

In addition **closure** is applied by drawing a line between stamps makes those groups more explicit. Placing the stamp inside a blue box, the description in a grey box, and icons in the orange box is another way of applying closure to make more explicit that this content belongs in the same group.

Closure is also applied by drawing a line after the header and by using different colours in the header, footer and the main part of the page (container) to make the type of content more explicit and to enhance legibility and discoverability.

**Continuation** users "tend to continue shapes beyond their ending points". The box that contain the stamp thumbnail, the stamp description related icons and buttons, appear in discrete boxes with different colour, however we tend to perceive that those boxes are enclosed in a wider box.

**Similarity** stands for the things which share visual characteristics such as shape, size, colour, texture, or value will be seen as belonging together in the viewer’s mind. In this example this principle is applied by repeating the same style to the boxes that contain the stamp thumbnail, the stamp description and related icons and buttons indicate that enclosed content is of similar type.

## 3.5 Accessibility (graphics/forms)

### a. Graphical elements - Design/Code

### b. Form completion - Design/Code

State how you ensure good accessibility, for example in form completion. Explain the tags you used.

## 3.6 Error prevention and recovery

### a. Design

Explain how you addressed accessibility on the design of the web site. For example for the following graphical elements what accessibility tags have been used in order to make sure that in case that the graphics cannot be displayed the users would still get the required information and would still be able to interact with buttons and icons.

In cases of form completing how did you assist the user to complete all the required field, to enter the information correctly and eliminate error and how did you address error recovery? For example did you use any instructions for completing the form? Did you provide any meaningful error messages in case the users did not completed the form correctly to help them correct their mistakes?

How have you addressed accessibility in the design. For example instructions for form completion, inclusion of images for descriptive or decorative purposes, or system response and error messages.

Illustrate your discussion with screenshots.

### b. Code to address error prevention and recovery

Provide the code you used to address accessibility, e.g. for form completion, graphics, or system response and error messages.

# **4. Janet**

Explain how your web site complied with Janet Regulations, Janet Policies and Legal Requirements. Max 200 words

# **5. Conclusions**

This should include reflection on the work carried out, how you worked as a team, problems encountered as part of your technical development lessons learnt and suggested improvements.

# **References**

Provide references to resources you may have used

# Appendices

## Appendix A: Code

Provide a full listing of your files, with well indented and commented code in the following format:

Filename Code

## Appendix B: Screenshots

Provide a screenshot of all your web pages, in the following format:

Filename Screenshot(s)

## Appendix C: Individual Statement