DECO1400 - Implementation Report

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Contents

1 Executive Summary

This document describes the implementation process & review of my website, New Zealand Adventures.

2 Implementation Summary

2.1 HTML Usage

My HTML pages are implemented in a modular, drop & load fashion. Each of the HTML pages included makes extensive use of common div containers. Each of these div containers have all relevant styling included in a master stylesheet. This allows simple copy/paste of existing HTML files, and slight modification (and linking) to create a new subpage.

2.2 CSS Usage

All CSS is contained with the style.css file and allows for a central location to change functionality across the website (e.g. change the banner colour on each HTML file included in the site).

In addition to element id & class id CSS selection, pseudo selectors (e.g. :hover) were utilised to add specific CSS animations (e.g. hovering over a button) to create a more aesthetically pleasing experience for the user. Animations are present on each of the buttons located on the banner nav-bar.

CSS media queries were also used extensively to achieve acceptable website responsiveness on different viewport sizes. Media queries were used for specific viewport max-width values. Media queries were used to hide, show or resize page content. For example, the website navigation page is hidden for small devices (max-width less than 600px) and a hamburger icon shown instead (which summons a dropdown menu on click.)

2.3 JavaScript Usage

JavaScript was used primarily to achieve responsiveness. Primarily for the small device drop-down navigation bar (present when max-width is less than or equal to 600px.)

2.3.1 Event Listeners

Multiple event listeners were utilised to implement the dropdown navigation panel. The onclick, onresize, onscroll & onload events were hooked. Each of these events were listened upon in order to close the drop-down navigation menu.

```
38 /*
37  * Listen for any click on the page. If dropdown menu is visible, make it hidden (unless
36  * the click is targetted on the dropdown activator)
35  */
34 window.onclick = function(event) {
33     if (window.dropdown_visible && event.path[0].getAttribute("onclick") !== "dropdown()")  {
32         document.getElementById("dropdown_menu").style.visibility = "hidden";
31         window.dropdown_visible = false;
30     }
29 }
28
27 /* User resizes page. Close dropdown menu (if open) */
26 window.onresize = function(event) {
25     if (window.dropdown_visible)
24         toggle_dropdown()
23 }
22
21 /* User scrolled. Close dropdown menu (if open) */
20 window.onscroll = function(event) {
19     if (window.dropdown_visible)
18         toggle_dropdown();
17 }
16
15 /* Set globals */
14 window.onload = function(event) {
13     window.dropdown_visible = false;
12 }
11
```

Figure 1: JavaScript Event Listeners

2.3.2 DOM modification

Featured on the 'review' page of the site, Is a textbox in which users can input a review and post it to the page. This functionality (although not persistent) was achieved with JavaScript. The function, 'doPost()', will take the name and post content entered by a user, parse this data, construct a new DOM object, and append that created object to the page appropriately.

```javascript
/* Post a new review on review page */
// Not saved serverside or in cookie, no xss risk
function doPost() {
    var review_container = document.getElementById("review_content");
    // Get review inputs
    var reviewer_name = document.getElementById("reviewer_name").value;
    var review_content = document.getElementById("review_content_text").value;

    // Don't allow excessively long input
    if (reviewer_name.length > 10) {
        alert("Name too long!");
        return ;
    }
    if (review_content.length > 100) {
        alert("Message too long!")
        return ;
    }

    // Get formatted date
    var date = new Date(Date.now());
    var weekdays = ["Sun", "Mon", "Tue", "Wed", "Thu", "Fri", "Sat"]
    var date_str = weekdays[date.getDay()] + " " + date.getDate() + "/" + date.getMonth() + "/" + date.getFullYear();

    // Construct new review
    var review_wrapper = document.createElement("div");
    var review_meta = document.createElement("div");
    var review_meta_name = document.createElement("h3");
    var review_meta_date = document.createElement("h5");

    review_wrapper.classList += "review_wrapper";
    review_meta.classList += "review_meta";

    // Apped to review meta header tags
    review_meta_name.appendChild(document.createTextNode(reviewer_name));
    review_meta_date.appendChild(document.createTextNode(date_str));

    // Append metadata to review meta
    review_meta.appendChild(review_meta_name);
    review_meta.appendChild(review_meta_date);

    // Append to review div
    review_wrapper.appendChild(review_meta);
    review_wrapper.appendChild(document.createTextNode(review_content));

    // Append review to page
    review_container.appendChild(review_wrapper);
}
```

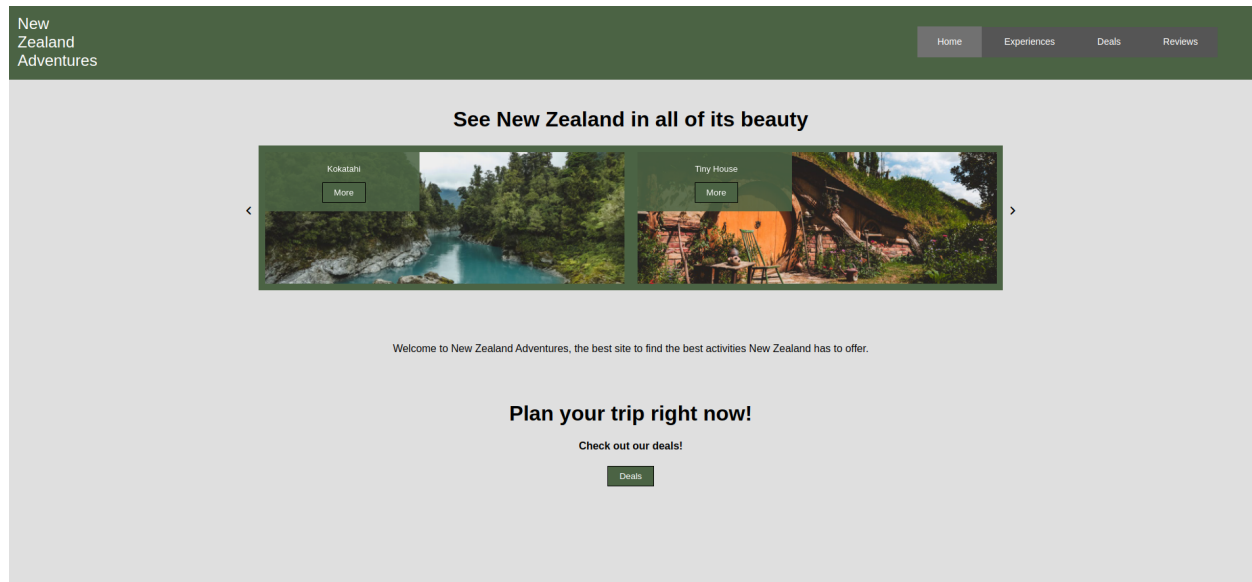Figure 2: JavaScript DOM modification

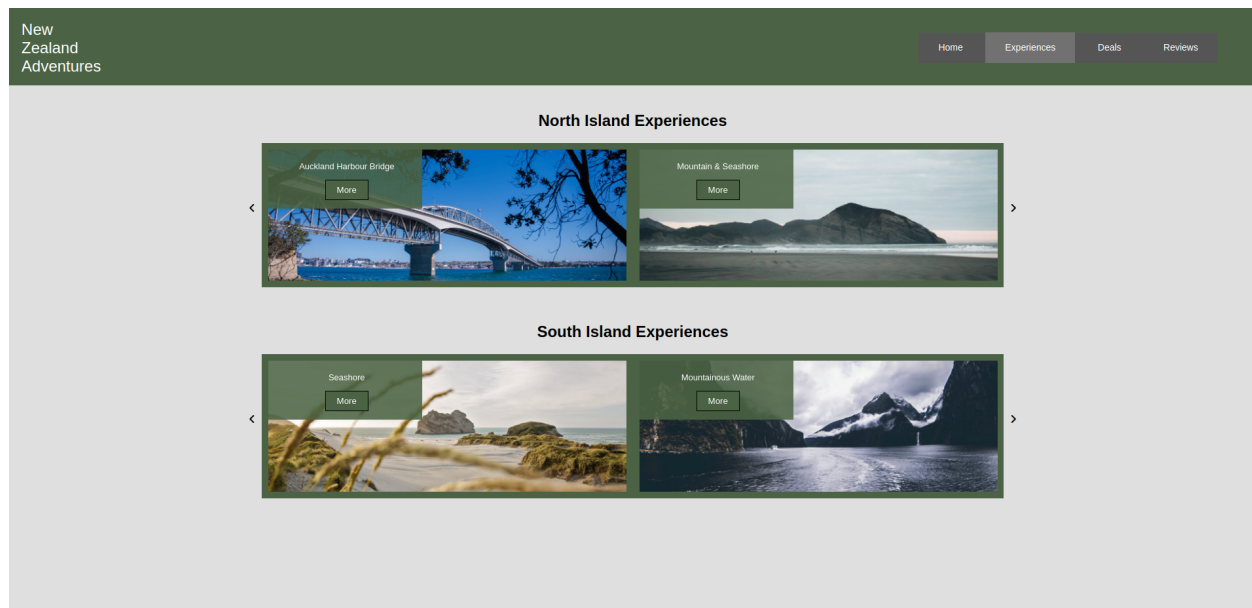# 3   Screenshots

Figure 3: Home page
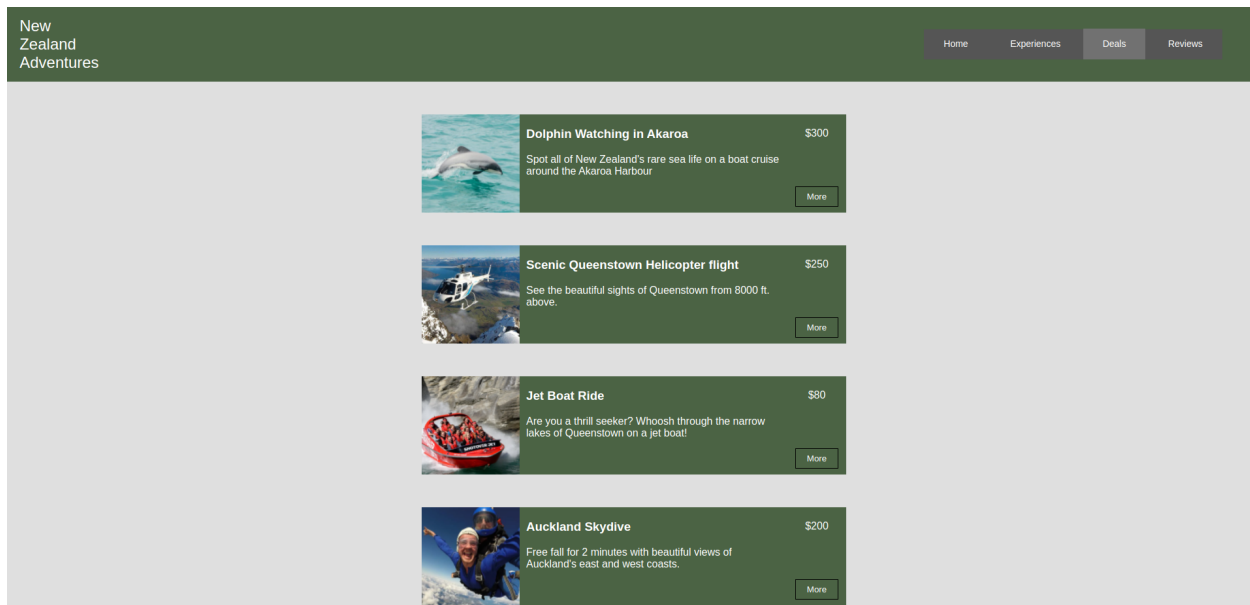

Figure 4: Experiences Page

Dolphin Watching in Akaroa $300

Spot all of New Zealand's rare sea life on a boat cruise
around the Akaroa Harbour

More

Scenic Queenstown Helicopter flight $250

See the beautiful sights of Queenstown from 8000 ft.
above.

More

Jet Boat Ride $80

Are you a thrill seeker? Whoosh through the narrow
lakes of Queenstown on a jet boat!

More

Auckland Skydive $200

Free fall for 2 minutes with beautiful views of
Auckland's east and west coasts.

More

Figure 5: Deals page

Here's what other people have to say about their visit to New Zealand.

Leave a Review

Your Name: James

Hello! I just submitted this review!

Post

James

Wed 16/12/2015

I found the Southern Island of New Zealand to be
particularly experience-packed, and very enjoyable.

John

Wed 05/02/2014

I had a great time seeing many different parts of New
Zealand. I found the culture to be fascinating and the
people to be exceptionally friendly.

Jack

Tue 21/01/2014

I've been to New Zealand for leisure many times before.
Each time I have visitied has failed to dissapoint. I highly
recommend visiting for your next holiday.

James

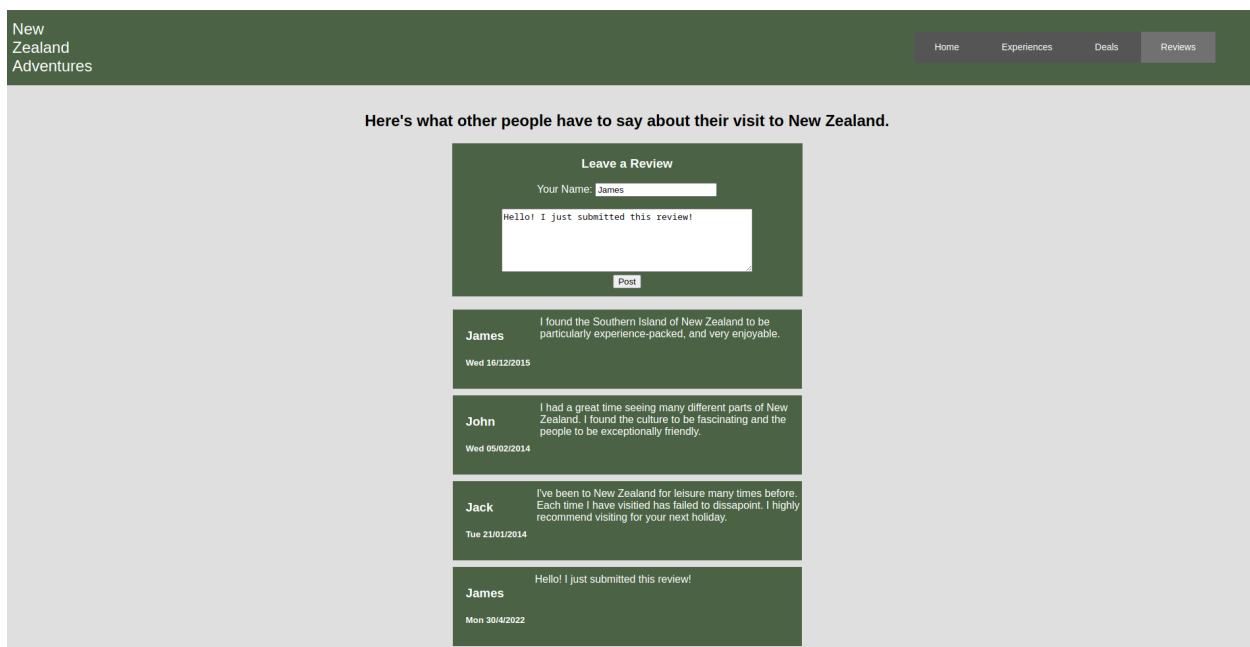Mon 30/4/2022

Hello! I just submitted this review!

Figure 6: Reivews page

6

4 Learnings

4.1 Challenges

Throughout the development phase, I came to appreciate just how difficult it is to create a website. The rules of HTML/CSS/JavaScript seem simple at first, but can become quite challenging when attempting to incorporate multiple design principles to create one web site.

4.1.1 Responsiveness

Without question, making my website responsive (i.e. to different view sizes/page resizes, on mobile/tablet/desktop) was the most difficult part of the implementation. I often found it extremely time consuming and especially difficult when attempting to ensure page content would not fracture or become hideously disfigured on different viewport sizes.

4.1.2 Space Management

I found it extremely difficult to adequately fill space on the website. I found it quite challenging to decide what additional content could be added to keep the user from seeing a bare-page. This, however, I believe is not so much of a challenge, as I believe if this website were to be developed professionally, there would be an abundance of potential content to add.

4.2 Take-away learnings

Once again, I have come to appreciate how difficult front-end development really is. I have certainly learned lots about HTML/CSS/JavaScript, but more importantly, I learnt about how important initial design planning is. Attempting to construct a website on-the-fly (without having an initial design to refer to) would have made the implementation drastically more difficult.

5 Evaluation Against Nielsen's Usability Heuristics

5.1 Heuristic 4 - Consistency & Standards

As proposed in the initial design report for this website, maintaining a consistent & standard design across the website was important. I believe that this was successfully achieved. Each of the pages included maintain an identical style, theme and function in the same way as each other.

5.2 Heuristic 7 - Flexibility & Efficiency of Use

As discussed in the design report, flexibility & efficiency of use was critical for this website. I believe that this heuristic has been achieved by providing a basic, and very familiar design pattern. I believe that most people who would come across this site have previously visited

a website with a similar design pattern (e.g. top nav bar, centered content, banner with navbar, etc.)

5.3   Heuristic 8 - Aesthetic & Minimalistic design

This heuristic as proposed in the design report was also achieved. This website features very select content and is very minimalistic. It is unlikely that any user would feel claustrophobic/overwhelmed by this site, regardless of which device they visit from.

6   Future

When critically evaluating my website, I believe that there is great room for improvement. I find that my website still appears very content-bare. If I were to have had more time to implement this website, I would focus on including more content, improving responsiveness, including more aesthetically pleasing CSS effects & more subpages.

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