Niels Hoogenkamp

Student number: 20060898

20060898@mydbs.ie

Abstract

This report outlines the design and development of a brochure-style website for Niels Holiday Homes, a family-run accommodation business in Ballyteige Burrow, Co. Wexford. The website was built using HTML5, CSS, and JavaScript, with a focus on responsive design, accessibility, and user-friendly booking request functionality. It includes a homepage with video, an interactive booking request form, local attractions, and contact details with integrated maps.

Niels Holiday homes

WEB DESIGN AND DEVELOPMENT

Contents

[Business Case 2](#_Toc200203100)

[Techniques Used 3](#_Toc200203101)

[Logbook 4](#_Toc200203102)

[Reflection 6](#_Toc200203103)

[References 7](#_Toc200203104)

# Business Case

Niels Holiday Homes is a well-established, family-run business inside the sand dunes of Ballyteige Burrow, County Wexford, Ireland. With over a decade of experience, the business offers premium, self-catering accommodation in a peaceful coastal setting overlooking the Celtic Sea. The location offers the best of both worlds: serene natural surroundings and close proximity to local pubs, restaurants, and a wide range of outdoor attractions. Whether guests are looking for a romantic getaway, a family-friendly retreat, or a solo escape into nature, Niels Holiday Homes delivers a unique experience grounded in comfort, charm, and quality service.

Despite our strong reputation and returning guests, we currently lack a dedicated website that fully represents what we offer. Most of our bookings come through word-of-mouth, which limits our reach and control. We are missing opportunities to connect with potential guests directly, showcase our unique offerings, and streamline booking inquiries. In today’s digital age, people expect to find information quickly and conveniently online. Without a modern website, we risk falling behind competitors who are more digitally visible.

We would like the website to be a clean, modern, and mobile-responsive website that reflects the quality and warmth of our business. This site will serve as a digital brochure and booking request tool, designed to provide all essential information about the homes, amenities, rates, and the surrounding area. It will also include a functional booking request inquiry form with validation to enhance user experience and reduce booking errors.

Key features of our offering include:

* **Free Wi-Fi**, **TVs**, and modern furnishings
* **Beach access** right outside the door
* **Fully equipped kitchens** for self-catering stays
* **Private bathrooms** in every home
* **Non-smoking policy** for comfort
* **Iron and ironing board**, plus hairdryer and tea/coffee facilities
* **Nearby hiking trails** and **restaurants**
* **Daily check-in** from 11:00am to 5:30pm
* **Free parking** and **bicycle hire** available

The website should be built not only to show these features but to create an easy and welcoming user experience. It needs to have a clean, modern design that reflects the calm and beauty of the coastal surroundings. The homepage should greet visitors with a full-screen beach video and highlights our story. On the bookings page there must be a seasonal rate table and a responsive, interactive request form with built-in validation. Visitors can also find ideas for things to do in the area, and easily contact us with questions or booking requests.

In the end, this project is about more than just a website. It’s about opening the door wider making it easier for guests to find us, understand what we offer, and begin their holiday journey before they even arrive.

# Techniques Used

Accessibility was an important consideration throughout while developing the Niels Holiday Homes website. My goal was to ensure that all users, regardless of ability, could navigate, understand, and interact with the site with ease. The following techniques and best practices were implemented:

* **Semantic HTML Structure**  
  The site uses clear and meaningful HTML5 tags like <header>, <nav>, <main>, <section>, and <footer> to define the structure. This helps screen readers interpret the content hierarchy correctly and improves SEO at the same time.
* **Alt Attributes for Images**  
  To support users who rely on screen readers and to improve search engine optimisation, all images throughout the site include properly written alt attributes. These attributes provide meaningful alternative text, which is especially important when images can’t load or for users with visual impairments.
* "Holiday homes interior" describes the layout and style of the house
* "Tripadvisor excellence" refers to the award badge shown to build trust
* "Hook Lighthouse Wexford" links to a local attraction

This approach helps ensure the website is both accessible and semantically correct, while also contributing to better indexing by search engines.

* **High Colour Contrast**  
  Inspired by high-end brochure websites like Yomira, I chose a soft yet high-contrast colour palette to enhance readability and visual comfort. The site primarily uses white backgrounds with dark text, supported by soft green accents (#619e8e) to create a calm, welcoming aesthetic that reflects the natural tones of the surrounding dunes and sea.
* **Responsive Layout with Flexbox and Media Queries**  
  To make sure the website works well on all screen sizes; I followed responsive design principles using CSS, mainly Flexbox and media queries. I searched and applied many of these techniques with the help of tutorials and examples from W3Schools.

I was able to design fluid layouts that adjust automatically for phones, tablets, and desktops. For example, columns on the homepage stack vertically on smaller screens, and Things to Do page the activity cards are displayed in a 4-column grid, creating a clean, visual overview. But this layout shifts to two columns on tablets and a single column on smaller phones.

* **Accessible Forms**  
  The booking form was designed with accessibility in mind, ensuring that all can interact with it effectively.   
  Label-Input Association:  
  Each input field is explicitly linked to its label using the label for="id" pattern. This improves compatibility with screen readers, allowing users to understand the purpose of each field without visual cues.  
  Custom Error Messaging:  
  Validation errors are shown in a clearly styled error box (#error-box) that appears dynamically when the user submits invalid input. This provides immediate feedback to users when issues need correction  
  Popup Design Considerations:  
  The booking form opens in a popup (.form-popup) that remains in the center on all screen sizes and includes max-height and overflow-y: auto to maintain usability on smaller screens and assistive browsers.
* **Keyboard and Focus States**  
  Interactive elements like buttons, links, and radio inputs are fully operable using only a keyboard. Focus styles (using :focus) are clearly visible.
* **Meta Tags for SEO and Accessibility**  
  SEO-friendly meta descriptions were included across all pages. These techniques combine to create a site that is not only visually appealing and responsive but also accessible and inclusive to a wide range of users.
* **Use of <div> Containers**To organise content and maintain consistent layout across the site, I used <div> containers extensively. Each major section, such as forms, image grids, pricing tables, and content blocks, is wrapped in div groups with class names like .container, .input-group, or .Booking-form. These containers help to: apply consistent styling using CSS classes, group related, elements logically (e.g., form fields, images), Structure layouts with Flexbox or Grid  
  Maintain responsive behaviour on smaller screens.

# Logbook

**Week 1: Planning & Setup (5th – 11th May)**

**Focus:** Project Foundation & Business Case

At the start of the project, I defined the purpose and goals of the website. The idea was to build a brochure-style, accessible website for a family-run holiday home business in Wexford. I created a folder structure separating HTML, CSS, JavaScript, and assets to keep everything organized from the beginning.

I planned the website structure by thinking carefully about the essential content and pages users would need. While I didn’t create a formal visual sitemap, I mapped out the core pages, Home, Bookings, Things to Do, and Contact, based on what similar holiday rental sites included and what would serve the business goals best."

This week was mainly about establishing a clear direction, understanding accessibility requirements, and identifying good design inspiration, particularly from the website Yomira.  
I drew by hand on a piece of paper how the website should look like to have an even look throughout.

**Week 2: Homepage & Navigation (12th – 18th May)**

**Focus:** Frontend Layout & Aesthetic Design

This week focused entirely on designing and building the homepage. I began by implementing a full screen autoplay video of the beach to create an immediate, immersive experience for visitors. The layout was inspired by luxury travel sites like Yomira, which influenced both structure and tone.

I used Flexbox and media queries to make the navigation bar and content sections fully responsive across devices. A calming, minimalistic colour palette was applied—primarily soft green accents (#619e8e) on white backgrounds—to ensure clarity and consistency.

Throughout development, I frequently resized the browser window to manually test layout responsiveness and maintain consistent spacing. This week was key in setting the visual direction of the site and building a clean, welcoming user interface.

**Week 3: Contact and Things to do Pages (19th – 25th May)**

**Focus**: Building Informative Pages

This week, I focused on developing the Contact and Things to Do pages, a deliberate choice, knowing that the Bookings page would be more complex and time-consuming. By completing these two content-driven pages first, I gave myself space to approach the form logic with fresh focus the following week.

For the Contact page, I embedded a Google Maps iframe to clearly show the holiday home's location, and structured key contact info, address, phone, email, and check-in details, using accessible HTML tags and clean layout styling. I kept the language welcoming and practical for guests.

The Things to Do page was designed to be visual and user-friendly. I created a responsive image grid of local attractions and activities using Flexbox. Each square includes an image, hover effect, and external link. I applied CSS properties like object-fit: cover to maintain consistent image dimensions and improve the visual flow.

I referenced W3Schools throughout the week to refresh my understanding of semantic structure, layout behaviour, and embedding external content like iframes. By the end of the week, these two pages were complete, setting me up to fully focus on the interactive bookings form in Week 4.

**Week 4: Bookings Page & Form Validation (26th May – 1st June)**

**Focus**: Bookings Page Functionality & Form Validation

This was the most technically demanding part of the project. I dedicated the entire week to developing the Bookings page, which included:

* A responsive pricing table with seasonal rates
* A pop-up booking form using JavaScript and CSS
* Fully client-side validation to prevent incomplete or incorrect submissions

Using Flexbox, I grouped inputs logically (e.g. name, guest count, dates), ensuring the form stayed readable and usable on all screen sizes. Every input field was clearly labelled to support accessibility.

The JavaScript logic validates:

* Name fields contain only letters
* Email and phone match specific regex patterns
* Check-in/out dates are in the future and logically ordered
* Room type is selected and guest count fits capacity

Instead of using a browser alert, I created a custom sliding error box (slideDown()) that scrolls into view when needed. This keeps the experience visually integrated and user-friendly.

I used W3Schools extensively to check syntax. Regexr.com was also very helpful for testing regular expressions interactively before adding them to the script.

**Week 5: SEO & Testing (2nd– 7th June)**

**Focus:** SEO, Accessibility, and Final Testing

With the core pages in place, I used this week to fine-tune the technical quality of the site. My focus was on improving search engine optimisation (SEO) and meeting basic accessibility standards.

Key activities included:

* Added <meta> descriptions to all pages for better indexing
* Set descriptive alt attributes for all meaningful images (for screen readers and SEO)
* Checked the semantic HTML tags (<main>, <section>, <nav>, etc.) to enhance content structure
* Created and added a favicon for browser tab branding

I also tested the site across Chrome, Firefox, and Edge, resizing the window and using keyboard-only navigation to ensure it worked well on desktop, tablet, and mobile.

This final polish stage helped make sure the website looked professional, loaded quickly, and was accessible for a wide range of users.

# Reflection

Developing this website for Niels Holiday Homes has been a learning experience. I learned the importance of structure, both visually and in code, by using semantic tags, responsive layouts, and accessibility best practices like labelled inputs and meaningful alt text.  
One of the biggest technical challenges was building the booking form. I used JavaScript and jQuery to create real-time validation for name formatting, email, phone, dates, and room capacity. For instance, I applied regular expressions to enforce valid input formats.  
I also implemented dynamic feedback using DOM manipulation. Instead of using intrusive alerts, I created a sliding error box that displays messages without breaking the page layout. This made the form feel more interactive and polished.

W3Schools was a key resource throughout the project. It helped me understand and apply core HTML, CSS, and JavaScript concepts, from structuring semantic HTML to building responsive layouts and styling elements effectively. I also used it heavily while developing the booking form, especially to learn about form attributes, validation techniques, and JavaScript event handling. Regexr.com was equally helpful, allowing me to test and refine regular expressions for email and phone number validation.

In the future, I’d like to make the site more modular, such as by creating more reusable CSS components across pages. I’d also connect the form to an email API to actually sending the booking requests via email.

Overall, this project deepened my understanding of full front-end workflows, from layout to logic to user experience.

I'm looking forward to continuing this project during the summer break. I’d like to explore new features like sending real booking requests via email, refining the design further to improve the user experience even more.

# References

CSS-Tricks. (2020). *What Does `playsinline` Mean in Web Video? | CSS-Tricks*. [online] Available at: https://css-tricks.com/what-does-playsinline-mean-in-web-video/.

Hardique Dasore (2023). *How to embed Google Map without API Key?* [online] DEV Community. Available at: https://dev.to/hardiquedasore/how-to-embed-google-map-without-api-key-1ii7.

RegExr. (2017). *RegExr: Learn, Build, & Test RegEx*. [online] Available at: https://regexr.com/.

W3Schools (2019a). *CSS Flexbox (Flexible Box)*. [online] W3schools.com. Available at: https://www.w3schools.com/css/css3\_flexbox.asp.

W3Schools (n.d.). *CSS Layout - Horizontal & Vertical Align*. [online] www.w3schools.com. Available at: https://www.w3schools.com/css/css\_align.asp.

W3Schools (2019b). *HTML Links*. [online] W3schools.com. Available at: https://www.w3schools.com/html/html\_links.asp.

W3Schools (2019c). *HTML meta tag*. [online] W3schools.com. Available at: https://www.w3schools.com/tags/tag\_meta.asp.

W3Schools (2019d). *HTML tables*. [online] W3schools.com. Available at: https://www.w3schools.com/html/html\_tables.asp.

W3Schools (2023). *HTML Responsive Web Design*. [online] W3schools.com. Available at: https://www.w3schools.com/html/html\_responsive.asp.

w3schools (n.d.). *CSS Box Sizing*. [online] www.w3schools.com. Available at: https://www.w3schools.com/css/css3\_box-sizing.asp.

w3schools (2019). *CSS Buttons*. [online] www.w3schools.com. Available at: https://www.w3schools.com/css/css3\_buttons.asp.

W3schools.com. (2019). *Google API Tutorial*. [online] Available at: https://www.w3schools.com/graphics/google\_maps\_intro.asp.

W3schools.com. (2025). *W3Schools.com*. [online] Available at: https://www.w3schools.com/cssref/sel\_focus.asp.

www.w3schools.com. (n.d.). *CSS Variables - var() Function*. [online] Available at: https://www.w3schools.com/css/css3\_variables.asp.

www.w3schools.com. (n.d.). *How To Create a Popup Form With CSS*. [online] Available at: https://www.w3schools.com/howto/howto\_js\_popup\_form.asp.

www.w3schools.com. (n.d.). *HTML input tag*. [online] Available at: https://www.w3schools.com/tags/tag\_input.asp.

www.w3schools.com. (n.d.). *HTML video autoplay Attribute*. [online] Available at: https://www.w3schools.com/tags/att\_video\_autoplay.asp.

www.w3schools.com. (n.d.). *HTML video loop Attribute*. [online] Available at: https://www.w3schools.com/tags/att\_video\_loop.asp.

www.w3schools.com. (n.d.). *JavaScript Date Reference*. [online] Available at: https://www.w3schools.com/jsref/jsref\_obj\_date.asp.

www.w3schools.com. (n.d.). *JavaScript String trim() Method*. [online] Available at: https://www.w3schools.com/jsref/jsref\_trim\_string.asp.

www.w3schools.com. (n.d.). *jQuery event.preventDefault() Method*. [online] Available at: https://www.w3schools.com/jquery/event\_preventdefault.asp.