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Britannia inn development

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# Requirements

During the designing stage of this project, a list of requirements was produced allowing for the developers to use these requirements to check that the website meets the required standards. The minimum requirements for this project were:

* Functional:
  + Mobile-first.
  + Accessibility features.
  + A suitable contact method for enquires.
* Non-Functional:
  + Higher quality images
  + Interactive maps
  + Menus

## Functional Requirements

The website needed to be mobile first designed. This is due to most website views coming from mobile devices. So, designing the website to be mobile first means that this version can be worked on for longer and therefore at a better standard.

Accessibility features allows for users to customize their experience within the website. Simple things such as a light and dark mode version of the website allows the user to modify the website in a way that they prefer.

A form was used to allow users to contact the inn. The user would simply fill in the form and press send. This form can be linked to the inn’s email which the managers can access.

## Non-Functional Requirements

Higher quality Images was achieved using carousels. These allowed for the images to be larger on the screen and more readable. Also, a carousel allows all the images to be condensed into the same space which helps with allowing the images to be larger.

An interactive map was implemented using a google maps API. Google maps is one of the most popular interactive maps on the internet (\*REFERENCE) meaning that it is familiar to many. This familiarity means that the user will understand how to interact with this section of the website.

Menus were simply implemented by using tables which could be linked to a database in future development.

# Chosen Tools, Frameworks and Programming Languages

## Tools

Visual Studio Code was the chosen tool for the development process. Not only is this because it is the most familiar tool for the development team, but due to the many features that it holds including Version control, AI auto completion and Live editing.

Version control allows for development to continue no matter where the development is happening. Whether it is at the park, in the office or at home, if there is internet connection progress can be made. Also, version control could allow for the website to be posted publicly whilst development continues.

Whilst many development tools have auto completion, visual studio code uses an AI engine to automatically complete not only words, but entire lines of code. This allows for development to progress faster whilst still being just as accurate. However, this is AI and can sometimes make mistakes. These mistakes means that you may have to redo certain sections of code which can take time.

Another handy feature of Visual Studio code is the live editing. Live editing means that during development when a section of code is complete the website will update with the added line of code. This allows developers to quickly identify what the code is doing to the website as they are working and make the necessary changes.

## Frameworks

The framework of choice was Bootstrap. Bootstrap is one of the most popular frameworks due to its high customizability (\*REFERENCE). In this project some Flex boxes, Carousels, Forms, off canvases were used.

A flex box was used to help with the positioning of the navigation bar on the desktop/tablet version of the website, giving the desired look of Link | Link | Link etc. Using flex boxes simplifies the method of using tables for positioning and for adjusting the distance between each link when the screen size changes.

Carousels were used to display images on a larger area of the screen. Bootstrap offers many versions of carousels and styling methods. The carousel that was used in this project contains the image, indicators (Shows what image you are on), a title and a description. However, the title and description do not fit onto the mobile version of the website so are cropped out.

The Form used on the Contact Us page is from bootstrap. Yes, HTML does have its own form tag, but the Bootstrap version is already formatted in a nice way. The form could have been the HTML version, but the Bootstrap version saves time.

An off canvas is a very common feature on mobile versions of websites when paired with hamburger menus. There are many methods to making a hamburger menu with bootstrap ranging from drop downs to accordions. Off canvases are so popular on mobiles because forms a temporary overlay to the website that the user can interact with.

## Languages

### HTML

HTML is one of the most common methods of developing websites (\*REFERENCE). This is due to how manageable it is and the simplicity of generating certain components. In more modern times, HTML is used less due to the invention of Online Website Development Tools that are drag and drop (\*REFERENCE). This method is becoming more popular because unlike HTML, it makes websites faster. However, all web developer should be familiar with at least the basics of HTML.

### CSS

Even with modern drag and drop web development tools, CSS is still used to customize the components. CSS is normally paired with HTML and improves many sections of the product from easier maintenance to faster website performance (\*REFERENCE). However, certain CSS will not work with certain browsers, meaning that more CSS may be required to capture any missed CSS due to browser incompatibility(\*REFERENCE). Yet CSS remains one of the most used methods of styling in HTML.

### JS

Again, JS is one of the most used methods to add functionality to a website(\*REFERENCE). JS is like many other popular programming languages such as Python and C# meaning it is rather simple to understand and code (\*REFERENCE). However, if a single character is incorrect or missing, then there is a chance that JS will not load, and the website would appear as though there is no JS attached to the website. Once all the errors have been ironed out, then JS becomes one of the best for adding functionality to a website.

(<https://data-flair.training/blogs/advantages-disadvantages-javascript/>)

# Version Control

This project used GitHub to manage version control. GitHub is an interface for interacting with Git. Git is a version control system that detects when a file has been updated and keeps a constant version of the project live. It does this by creating branches which can be edited in whatever way that it needs to be. Once the editing has been done, Git offers a “Push” option which will merge the edited branch with the live hosted version. During the merge it will detect whether any code clashes such as added, edited and removed lines and brings this feedback to the developer allowing them to choose which bits should be overwritten and which should not.

A screenshot of a computer

Description automatically generated

# Testing

## Performance, Accessibility, Best Practice and SEO

Old Website:

Graphical user interface, diagram, text, application

Description automatically generated

This Solution:

A picture containing text, font, screenshot, circle

Description automatically generated

This newly developed version of the website has a higher score for Best Practices and SEO. These are some signs that a website has been brought up to code and therefore more accepted by algorithms increasing the views on the website. However, this version does slightly decrease the original websites performance and accessibility. The performance decrease can be explained by the addition of features such as carousels. These carousels not only hold the data from the original, but the carousels HTML, CSS and JS which takes up more space and therefore decrease the performance. The accessibility score has decreased due to there being more to click on. On the original website, the links are clearly identified, and they are also the only accessible features of the website. This solution involves more interactive components such as the hamburger menu and carousels. Due to there being more to click on and the interactive features being in different places contributes to the lower accessibility score.

## Test Tables

### Desktop/Tablet

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No | Description | Expected outcome | Actual outcome | Success? | Comments |
| 1 | Navigation | Navigate Between Pages | Navigate Between Pages | Yes |  |
| 2 | Functional Form | Form gathers input, sends to email account | Doesn’t send to email | No | Needs Linking to an email account |
| 3 | Functional Carousel | Carousel to change image, heading and content | Carousel to change image, heading and content | Yes |  |
| 4 | Interactive Map | Map From google maps that can be interacted with | Map From google maps that can be interacted with | Yes |  |
| 5 | Functional Dark/light mode | Switches to dark/light mode | Switches to dark/light mode | Yes |  |

### Mobile

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No | Description | Expected outcome | Actual outcome | Success? | Comments |
| 1 | Navigation | Navigate Between Pages | Navigate Between Pages | Yes |  |
| 2 | Functional Form | Form gathers input, sends to email account | Doesn’t send to email | No | Needs Linking to an email account |
| 3 | Functional Carousel | Carousel to change image, heading and content | Carousel to change image | No | The Heading and content are missing due to being too small. |
| 4 | Interactive Map | Map From google maps that can be interacted with | Map From google maps that can be interacted with | Yes | Is missing the pin |
| 5 | Functional Dark/light mode | Switches to dark/light mode | Switches to dark/light mode | Yes |  |

# End User Documentation

## Navigation

### Desktop/Tablet

A green and white building

Description automatically generated with low confidence

On a computer/tablet, simply click/tap on one of the white locations in the blue bar near the top of the screen. This will take you to the corresponding page.

### A screenshot of a computer Description automatically generated with medium confidenceMobile

A screenshot of a menu

Description automatically generated with low confidence

On Mobile, Click the three white bars at the top left of the screen (Left image). This will bring out a pop out menu (Right Image).

From here, select one of the white locations and it should relocate you to the corresponding page.

## Dark/Light Mode

### Desktop/Tablet

A picture containing text, screenshot, font, logo

Description automatically generatedA screenshot of a computer

Description automatically generated with low confidence

On desktop/tablet, click/tap the small cog to the right of the navigation bar (Left Image).

This will change the colour of the backgrounds and the font (image below)

### Mobile

A screenshot of a phone

Description automatically generated with low confidence A screenshot of a menu

Description automatically generated with low confidence

On Mobile, tap on the small cog located at the bottom left of the screen (Left Image).

This will change the pages background and font colours (Right Image).

## Carousel

### Desktop/Tablet & Mobile

Desktop/Tablet:

A picture containing text, outdoor, car, land vehicle

Description automatically generated

Mobile:

A view of a town and a body of water

Description automatically generated with low confidence

In this website, certain pages contain a carousel. To use the carousel, click/tap on the left or right side of the carousel image. This will be being you to the next image along.

Or use the white dashes located at the bottom of the image to navigate to a certain image.

## Maps

### Desktop/Tablet & Mobile

Desktop:

A map of a city

Description automatically generated with low confidence

Mobile:

A picture containing text, screenshot, map

Description automatically generated

On the Locations Page, there is an Interactive Map located at the bottom of the screen. Simply click/tap on the map and drag your mouse/finger around the screen to move the map. To zoom in on Desktop, hold the Ctrl key and use the wheel on the mouse to scroll in and out. On tablet and mobile, use place to fingers on the map. Then either separate your fingers to zoom in or bring your fingers together to zoom out. Finally, at the top of the map there is a button that says, “Your Location”. Once this is clicked/tapped a popup will appear in the top of your screen asking to retrieve your current location. Denying will mean the map will not look for your location but accepting will bring the map to your approximate location.

## Form

### Desktop/Tablet & Mobile

Desktop:

A screenshot of a contact form

Description automatically generated with medium confidence

Mobile:

A screenshot of a contact form

Description automatically generated with medium confidence

On the Contact Page, there is a form. This form will send your message to the email account of the Britannia Inn.

Simply click/tap on a box, type email, name or message (Depending on which box you tapped) then click/tap on the next box. And so on until all the boxes white boxes are filled with information.

Finally, to send the details and message, click/tap submit.

If you don’t want to fill in the form, there is the email address and phone number of the Inn for you to contact them this way.

# Evaluation and Discussion

The website was designed to be mobile first, since most website views are now from mobile devices. This website has a selection of either a Desktop/Tablet version or a Mobile version of the website. These versions are then switched between using JavaScript to determine whether the screen is at the selected width. The method used to switch between both versions could have been simplified with using bootstraps flexboxes which may have put less onto the performance of the website.

This solution contains many more features for the user to interact with, improving the overall experience when on the website. The dark/light mode feature was added to help improve the accessibility of the website allowing those who prefer or need a darker/lighter screen to use the website. More features such as a font size slider could also allow those who find it difficult to see smaller objects to use the website.

This solution does contain a contact method allowing the user to contact the inn’s managers. However, due to time constraints the form is not linked to an email account. The form itself is a simplistic design allowing the user to quickly understand what this will do.

Using carousels, this solution managed to get the images to be higher quality. The Bootstrap carousel that was used allowed for headings and descriptions to be added giving the images some context. One downside to using carousels, would arise when it comes to adding more content to the carousel. This process would most likely be done through a database which could take some time when making the backend to the website, however it is unlikely that anything will change to any of the landmarks near the Britannia Inn.

The interactive map retrieved from a the google maps API allows he user to view the Inns surrounding area for them selves which could be useful for planning days out. Also, the development team added a locator button that ill take the user to their current location allowing them to see many things including which way the Inn is and how far it is roughly. However, during the design stage of the website it was originally discussed that the interactive map would allow navigation to the Inn allowing them to further improve their planning. However, due to time restrictions and other complex coding issues, this could not be implemented.

Simple enough, the menus allow the user to preview what their options would be once they arrive at the Inn. This was done using a table, which with further backend development could be added to via a database expanding the table where needed.

This solution is providing a competitive advantage due to its

Future development could include:

* Attaching an email to the contact form.
* Investigate Flex box version of the website.
* Add a settings area that contains the dark/light mode and a font size slider.
* Improve interactive map by adding direction capability.
* Expand Backend including connecting to a database.

# Appendices – Annotated Code Listings

## HTML

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## CSS

### Light

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### Dark Mode Differences

A screen shot of a computer

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## JS

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Description automatically generated

A screenshot of a computer program

Description automatically generated with medium confidence

A screen shot of a computer code

Description automatically generated with low confidence

A screenshot of a computer program

Description automatically generated with low confidence

A screen shot of a computer code

Description automatically generated with low confidence

# References