University of Gloucestershire

CT4034: Website Development, 2023-2024 BSc Computer Science

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Introduction

In collaboration with the Gloucestershire Constabulary, the BIKEWATCH website has been completely developed and implemented with the intention for the public to register their bikes with relevant useful information and issue a report query relating to the theft of their bike which police officers should access. The website would provide less time-consuming efforts from police officers to deal with bike theft and bolster their quality of work while investigating these bike thefts. Mentioned before, police officers will have access to the website however they will be admins and obtain additional features such as accessing report queries sent by regular users from the backend and changing the status of the report query.

Below includes the uniform resource locator of the website & the username and password of the Plesk Control Panel:

Uniform Resource Locator of the website: s4302418-ctxxxx.uogs.co.uk

Uniform Resource Locator, Username & Password of the Control Panel: s4302418-ctxxxx.uogs.co.uk:8443, s4302418, Sweetm0ther82-

Designing Process of the BIKEWATCH website

Producing wireframes for website

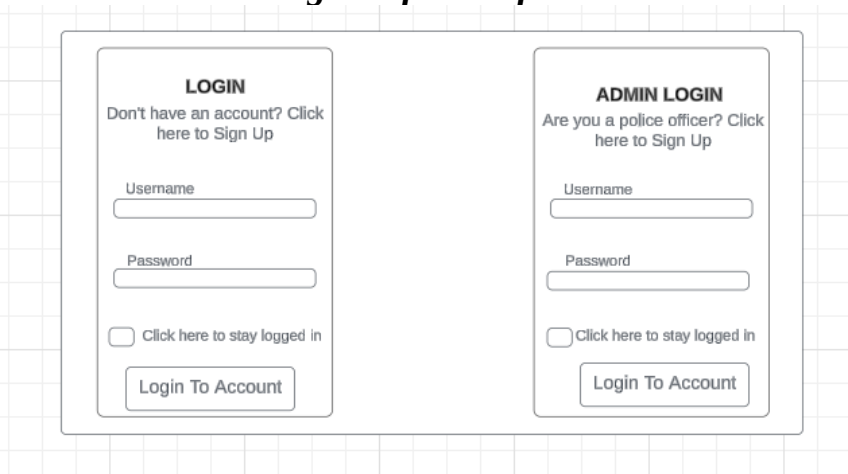


Figure 1 – Proposed wireframe for Login Page (LucidChart)

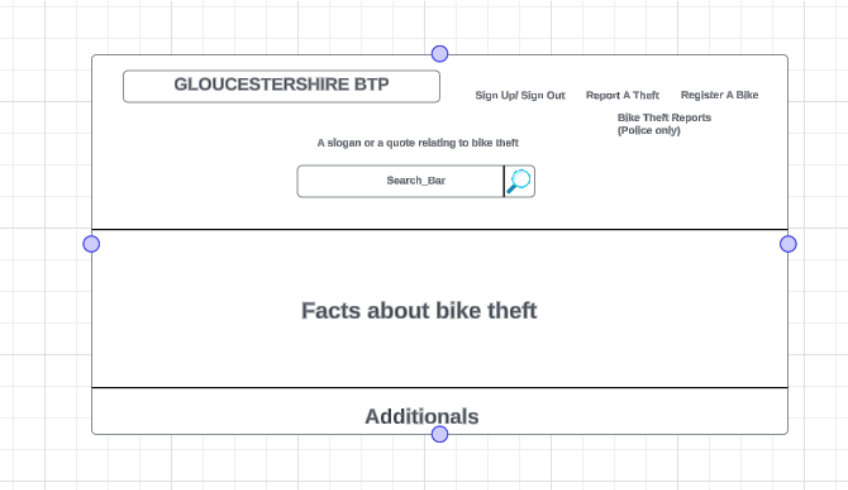


Figure 2 – Wireframe for Home Page (Lucidchart)

During the designing phase of the BIKEWATCH project, several diagrams were drawn. They are useful and essential as they "are expressions of ideas and insights" (Brown, 2011). Responsible for acting as the blueprints of the product with no additional information, providing abstraction to define the significant aspects of the product in a simplistic way. The wireframes displayed in Figure 1 and Figure 2 represents the template of the structure and key features of the website's potential login and home page visually in a rough sketch. It is not guaranteed that the wireframes above represent the final design of the webpages so minimal mandatory features were added initially such as buttons and text fields. As testing is active, more content related to the frontend and the backend could be added, modified or removed during the entirety of the website development process.

Learning and applying HTML & CSS

Before converting the wireframes into implemented code to produce the BIKEWATCH website, it was necessary to learn and practice HTML and CSS. Basics and immediate level coding was practiced for two weeks, helping craft a simple user-friendly graphic interface for the website however the principles of website design was not considered combined with minor mistakes which were later fixed during testing therefore the website pages came out visually unappealing (MDN Web Docs, 2018).

Production

BIKEWATCH Project Plan

It was scheduled for the website to finish production around the months of March-April however it took more time to make complete modifications to the webpages as unit and integration testing stages took place. At the end of April, all the visual features of the BIKEWATCH website had been completed. Several testing phases were carried out for the visual side however it took a long time due to prolonged changes because of lack of knowledge. This would cause significant issues when dealing with the backend area of the website as it took less time to implement, test and changes. The website would look static.

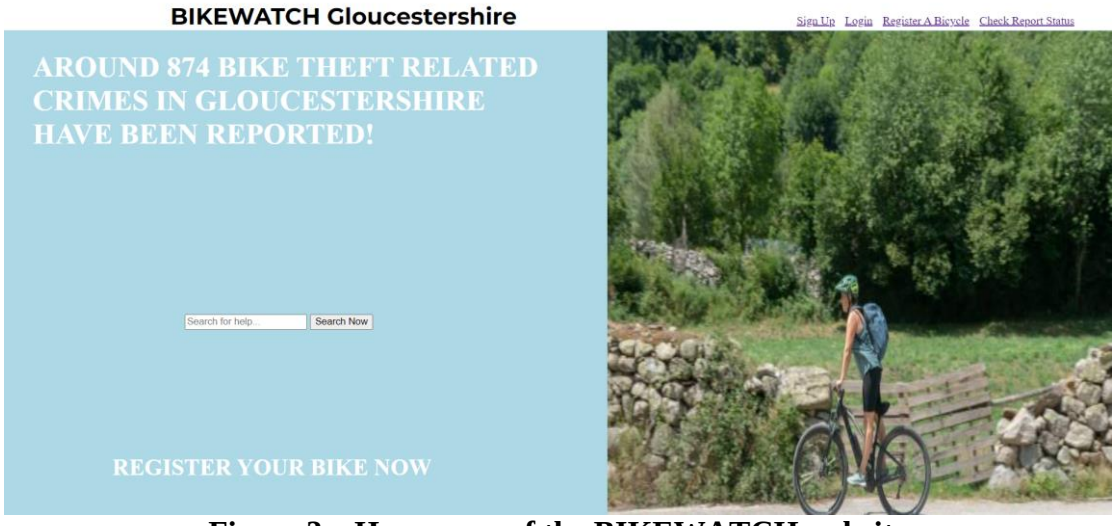


Figure 3 – Homepage of the BIKEWATCH website

In Figure 3, the homepage has been produced with the title and the navigational links on the header of the website. When viewing the website, it is deemed simplistic and minimal.

JavaScript, PHP & MySQL Implementation

```
<script>

function toggle()
{
    var checkbox = document.getElementById('police');
    var input_police = document.getElementById('collar_number');

    if(checkbox.checked)
    {
        input_police.style.display = 'block';

    }

    else{
        input_police.style.display = 'none';
    }
}

</script>
```

Figure 4 –Applying JavaScript into one of the webpages

Minimal amounts of JavaScript were implemented within the source code due to time-consuming testing. Figure 4 shows some JavaScript source code hiding and revealing a HTML input type text element if the user toggles the checkbox. The checkbox is whether the user is a police officer or not, if they are an additional input field is added and the user should input their collar number (Metropolitan Police, 2019). More JavaScript implementation could have been added to make the website more interactive and serve it's major purpose.
Figure 5 displays the creation of a table called "User" which registers two different users: Public and Private. The private users represent the police officers who would have special access to one of the private webpages to see report queries.

		id	email_address	password	user
☐	Edit Copy Delete	1	police_user	password_police	Private
☐	Edit Copy Delete	2	public_user	password_public	Public

Figure 5 –" Users" table on MySQL using Plesk

Testing Process

Test Case #1

Test Number	*Description of Test*	*Inputs required*	*Expected Results*	*Actual Results*	*Status*	*Functional?* *Non-functional*

						?
1.	A user can create an account	Full Name, Email Address, Password	An account is created	Nothing pops up	Fail	Functional
2.	The input fields are shown	None	Input fields are shown on webpages	All input fields pop up	Pass	***Non-functional***

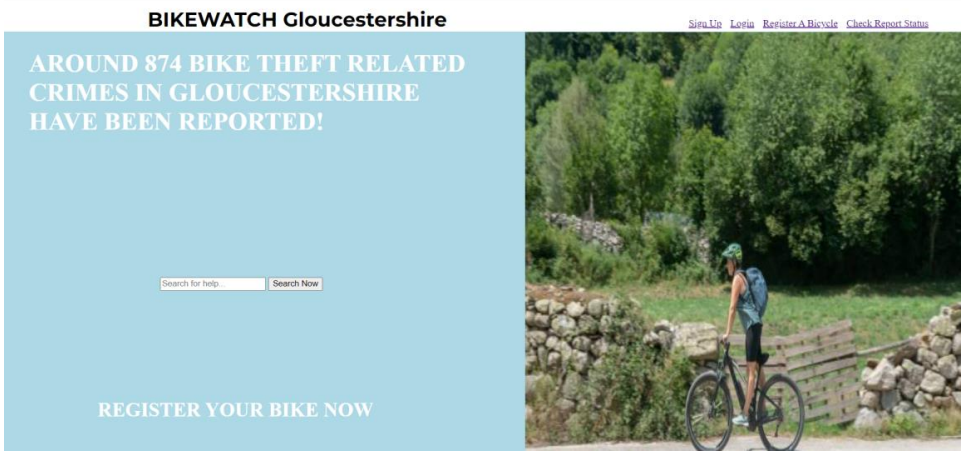
Reference List

Brown, D.M. (2011). *Communicating Design: Developing web site documentation for design and planning*. Berkeley, Ca: New Riders.

MDN Web Docs (2018). HTML: HyperText Markup Language. [online] MDN Web Docs. Available at: https://developer.mozilla.org/en-US/docs/Web/HTML

Metropolitan Police (2019). *Home | The Met*. [online] Police.uk. Available at: https://www.met.police.uk/.

Appendix One



BIKEWATCH Gloucestershire

Home

Register Your Bike Here

Manufacturer part number (MPN): Brand of Bike: Model of Bike: Type of Bike:

Bike Size: Bike Colour: Bike Gears: Bike Brakes:

Bike Suspension: Gender: Age Group: Bike Image: Choose File No file chosen

Register Now

Report A Missing Bike

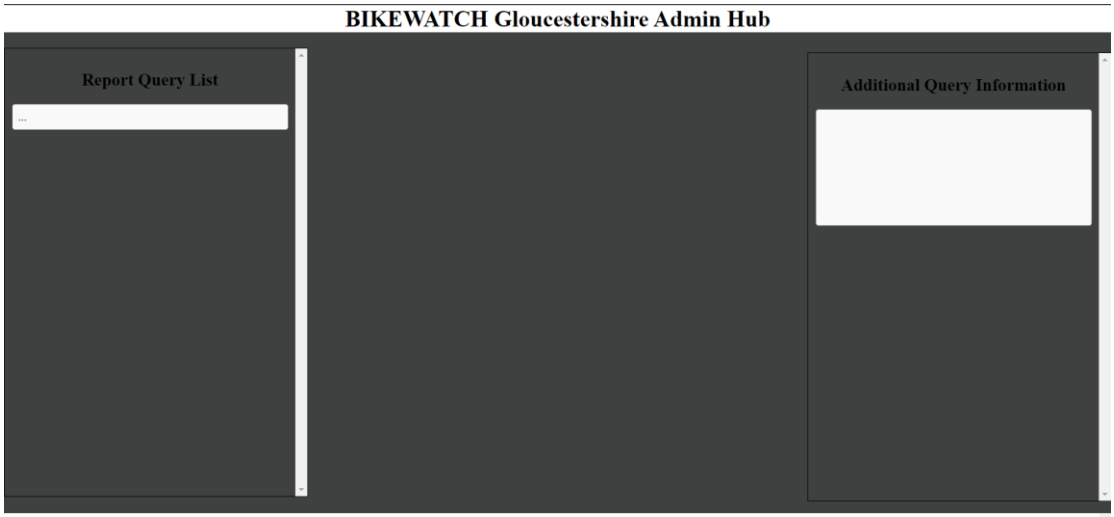
Registered Bikes:

Last Seen Location:

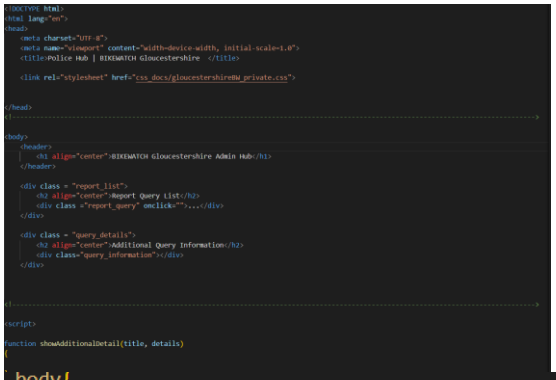
Bike Description:

Phone Number:

Report Now



Appendix Two




```css
body{
    margin: 0;
}

header{
    padding: 0%;
    margin: 0%;
    background-color: white;
}

#login_title{
    margin: 0;
    padding: 0;
    @font-face {
        font-family: 'Montserrat';
        src: url('fonts\Montserrat\static\Montserrat-Bold.ttf');
    }
    font-family: 'Montserrat', sans-serif;
}

#new{
    position: fixed;
    top:20%;
    right:45%;
}

.login_form_citizen{
    position: fixed;
    top:40%;
    left:30%;
}

.login_form_police{
    position: fixed;
    top: 40%;
    right:30%;
}
```