LONDON METROPOLITAN UNIVERSITY

ITAHARI INTERNATIONAL COLLEGE

Module Code & Module Title

CC4057NT Introduction to Information Systems

Assessment Weightage & Type

40% Individual Coursework

Year and Semester

2021-22 Autumn 2

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Assignment Due Date: 8th April 2022

Assignment Submission Date: 8th April 2022

I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline in order for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a marks of zero will be awarded.

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1. Introduction

This is the third coursework of our module “Introduction to Information System” which requires us to create a basic e-commerce website for a book store using HTML, CSS and JavaScript. To start off this website, I first started by researching some basic topics such as website, website and also about HTML, CSS and JavaScript. Below I’ve listed briefly about my knowledge and findings of these topics:

1.1 Webpage and website

Webpage is a single document on the internet created through HTML whereas website is the collection of more than one webpage. Further more briefing of these topics is given below:

1.1.1 Webpage

A webpage is a single document which has its own URL address, which is used to display or access it. Depending on how the developers have set these URLs and websites, they might be private or public. URLs may be navigated using any web browser, and users can copy and distribute them. (JavaTpoint, 2021)

Text, pictures, and linkages to other web sites and files can all be found on a webpage. A web page is frequently used to offer viewers with information, including images or videos to help illustrate essential themes. A web page can also be used to offer products or services to website visitors. (Computer Hope, 2021)

1.1.2 Website

A website is made up of multiple webpages that are connected together through hyperlinks. People can quickly navigate any website using a web browser and the domain URL, just as they do with a webpage. Websites are also developed using the same programming languages that are required for webpage development. Website development, on the other hand, is more difficult and time-consuming.

Static and interactive websites are the two most common types of websites. Static websites are intended to distribute information and resources without requiring visitors' participation or contact whereas, interactive websites use comment boxes, chat boxes, and article posting to communicate with other members and the author. Affiliate websites, e-commerce websites, dating websites, social networking websites, and so on also include on other categories. (JavaTpoint, 2021)

The website designed here in this very coursework is for a bookstore and contains of a total of five pages namely, Home, Product, AboutUs, Bog and Research. In this website, the 'Home' page is the hub through which all the other webpages are interconnected. We can navigate from one page to another through the navigation menu provided on the top of the page and the information related to the store or the website is depicted in the footer section at the bottom of each page. The 'Product' page contains of the books(products) available in the store, 'About Us' page contains of information about the book store including from the board members to customers and number of stores and books available. The 'Blog' page is for articles that are submitted by the visitors or customers or even the board members of the website through the form provided there. Whereas, the 'Research' page contains information about various other websites from which this very website was inspired.

This website is a static website designed by using the three main components: HTML, CSS and JavaScript. Though, it lacks implementation of database and fails to save customer's credentials, I've used javascript for the form validation which is capable of displaying errors regarding the name or mail provided.

1.2 HTML, CSS and JavaScript

HTML is the building block of a webpage, CSS is for the design of the website and JavaScript acts a role to make the website more interactive. Below is a quick briefing on these topics.

1.2.1 HTML

HTML stands for Hypertext Markup Language and was created by Tim Berners-Lee in 1990. HTML is a markup language that is used to build electronic documents that are displayed on the internet. Each page has a series of hyperlinks that connect it to other pages. Every web page that we view is created using a single HTML version.

HTML coding guarantees that text and images in your browser are formatted correctly. A browser would not be able to display text as elements or load images or other elements without HTML. HTML also supplies the page's basic structure, which is then covered with Cascading Style Sheets to customize its appearance. (Computer Hope, 2021)

There have been numerous HTML versions on the market since HTML's inception. HTML5 is the version we're using right now. It is the most recent version of the HTML.

In January 2008, the first draft of this edition was released. The W3C (World Wide Web Consortium) and the WHATWG (Web Hypertext Application Technology Working Group) are two important groups involved in the creation of this version. (Pedamkar, 2022)

Figure 1 HTML logo (cliparkey, 2021)

1.2.2 CSS

Cascading Style Sheets (CSS) is an acronym for Cascading Style Sheets. CSS specifies how HTML elements should appear on a screen, in print, or in other media. It is used to design and alter the colors, style, fonts, size, weight, and many other properties of HTML objects to make webpages presentable. It saves a lot of time and effort. It has the ability to control the layout of numerous web pages at the same time. CSS files contain external stylesheets.

CSS is a style sheet language for the web. It can be used with any XML-based markup language and is not dependent on HTML. It was proposed by on 10th October 1994. (Parvez, 2021)

Figure 2 CSS logo (Subpng, 2021)

1.2.3 JavaScript

JavaScript is a client-side programming language with a lot of capability. JavaScript is mostly used to improve a user's engagement with a webpage. In other words, you may use JavaScript to make your website more vibrant and engaging. JavaScript is also commonly utilized in the production of games and mobile applications. Brendan Eich

created JavaScript in 1995, and it first appeared in Netscape, a prominent browser at the time. The language was originally known as LiveScript, but it was eventually renamed JavaScript. JavaScript's grammar is heavily influenced by the programming language C. (Hartman, 2022)

Figure 3 JavaScript Logo (Opencode, 2018)

2. Aim and Objectives

The aim of this coursework is to create an e-commerce website for a store that sells various books with at least 5 web pages, including a specific blog page and a research page.

The objectives for this coursework are listed below:

- It gives us the basic concept of website and how a website is created.
- It teaches about the tags, elements, structuring and formatting of HTML as well as that of CSS and JavaScript.
- We can learn to make wireframes and a website according to the wireframe.

3. Tools used in this coursework

In this coursework, I have used Balsamiq for the creation of wireframes, Visual Studio Code (VSC) as the text editor and Microsoft Word for the documentation part.

3.1 Balsamiq Wireframes

Balsamiq Wireframes refers to website wireframe creator with a graphical user interface. It uses a drag-and-drop editor to enable the developer to organize pre-built widgets. The software is available in a desktop version as well as a Google Drive, Confluence, and JIRA plug-in. It allows you to imitate the experience of sketching on a paper or a whiteboard on a computer. It compels us to concentrate on structure and

content, rather than devoting time to long talks about colors and details that should be saved for later in the process. (Balsamiq, 2022)

Figure 4 Balsamiq Wireframes Logo (MarktechForum, 2018)

3.2 Visual Studio Code

Visual Studio Code is a "free-editor that assists programmers in writing code, debugging, and code correction using the intelli-sense method." In other words, it makes it simpler for users to develop code. Many people claim it's half an IDE and half an editor, but that's up to the developers to decide. It supports many programming languages and features cross platform support and also intelli-sense, which means it can detect if any code snippets are missing. It normally supports all programming languages, however if a programmer wishes to use a language that isn't supported, they can download and install the extension. Furthermore, because the extension runs as a separate process, it does not slow down the editor. (Pedamkar, 2022)

Figure 5 VS Code Logo (iconape, 2021)

3.3 Microsoft Word

MS Word is a Microsoft word processor that is used to create professional-quality documents, letters, reports, and other documents. It offers comprehensive capabilities that let you format and modify your files and documents in the most efficient way possible. MS Word allows users to make reports, create papers, resumes, and

contracts, among other things. One of the most often used programs in the Office suite is this one. (Byjus, 2022)

Figure 6 Microsoft Word Logo (Logo Download, 2021)

4. Wireframes

A wireframe is a rough sketch of a webpage or app in two dimensions. Wireframes show the page's framework, design, information architecture, user navigation, functionality, and expected behaviors in detail. Because a wireframe usually depicts a product's original plan, it's important to keep design, color, and graphics to a minimum. (Hannah, 2021)

The website designed for this coursework also was created by first designing a basic concept of layout and design through wireframing. Below I've shown the wireframes of the pages and how it turned out after they were finally ready.

4.1 Wireframe for the 'Home' page

The 'Home' page consists of a navigation menu, a banner image, some recommended products and a footer section.

- The first section containing the navigation menu and the banner image

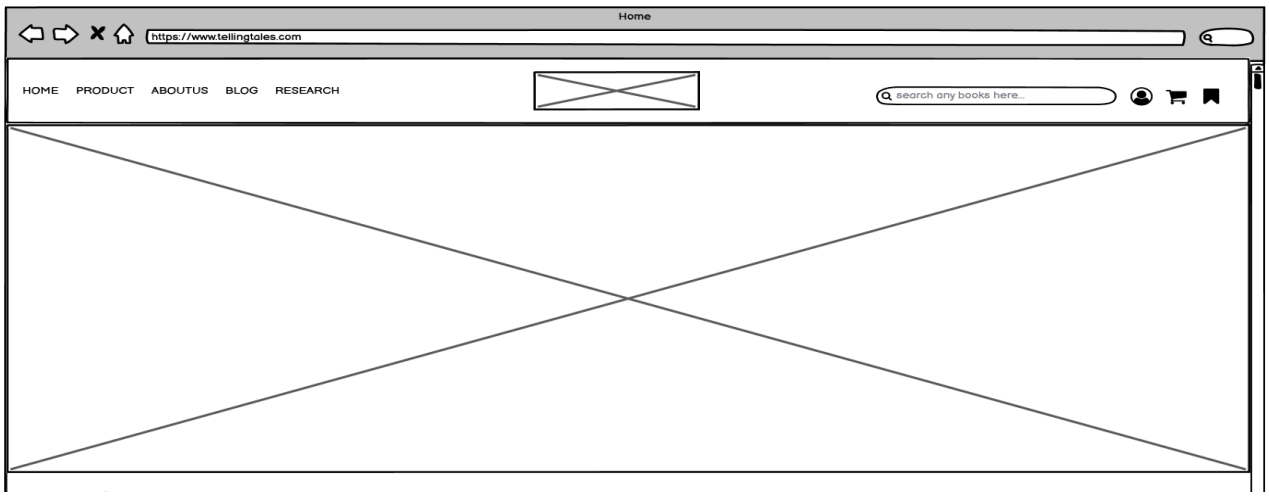

Figure 7 Wireframe of Home Page: Navigation menu and banner image

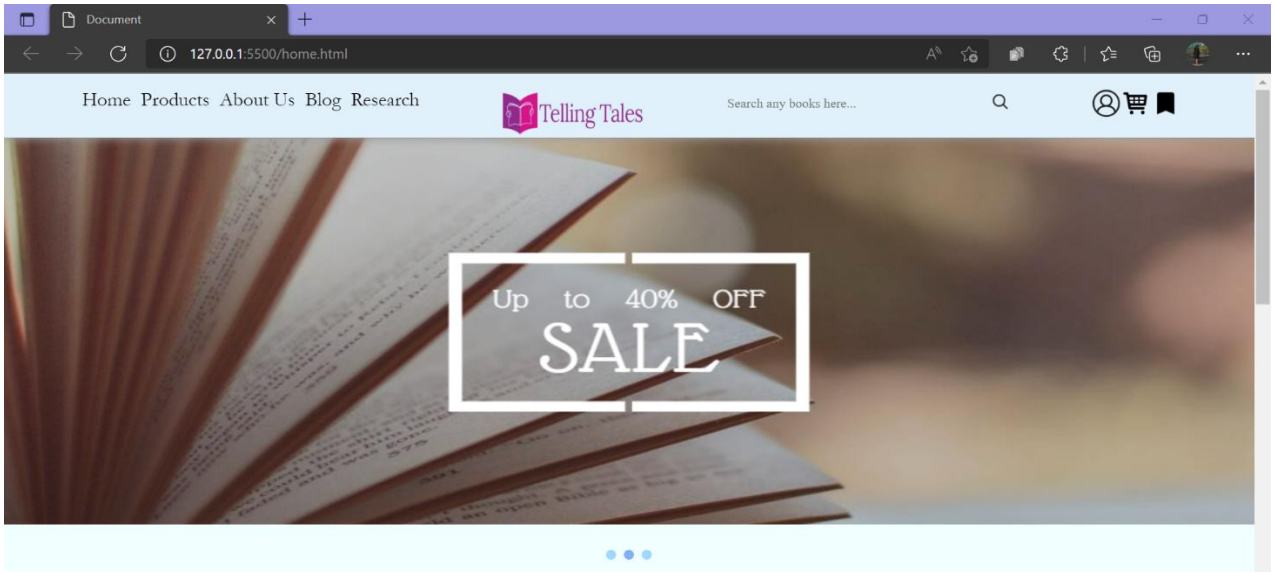

Figure 8 Home Page: Navigation menu & banner image after implementation of code

- The second section containing the list of books

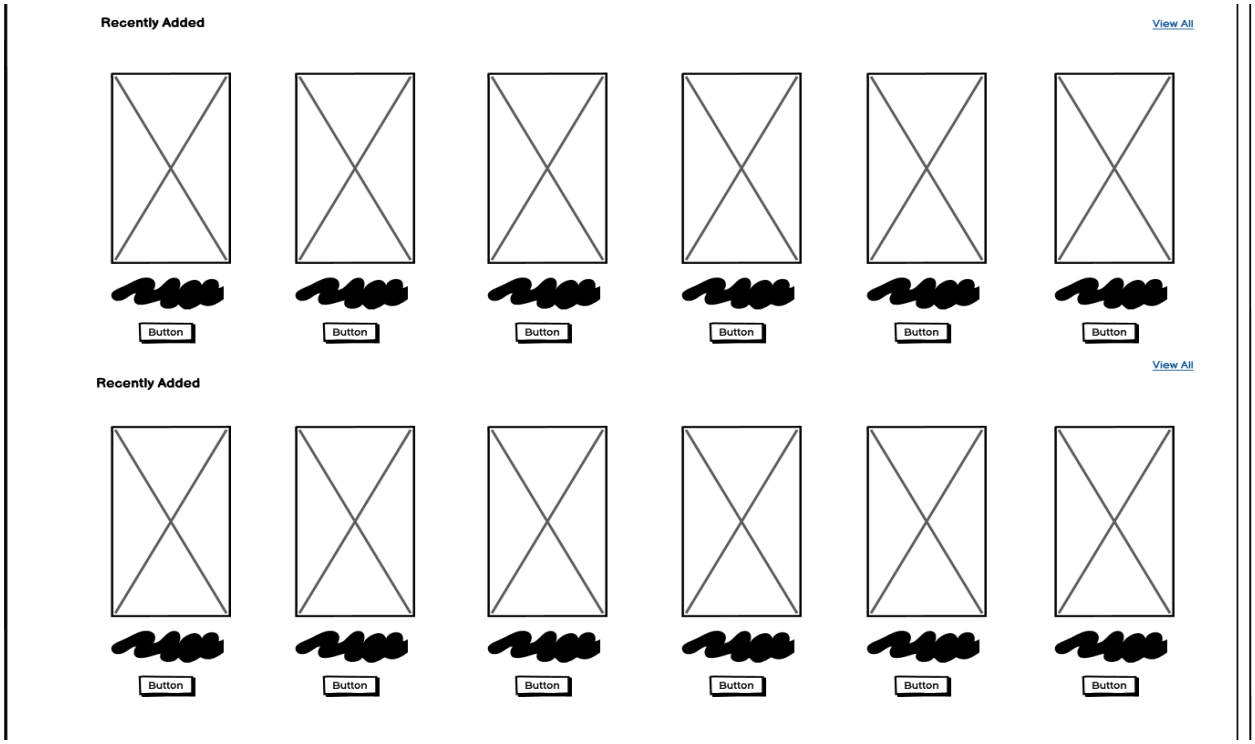

Figure 9 Wireframe of Home Page: Lists of books

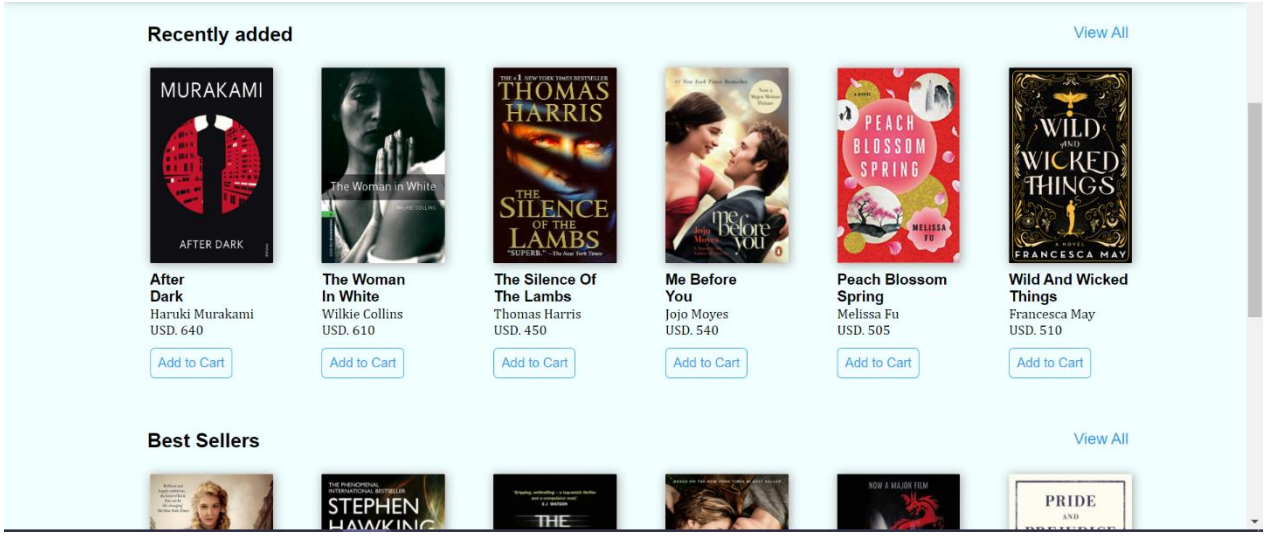

Figure 10 Home Page: Lists of books after implementation of code

- The footer section

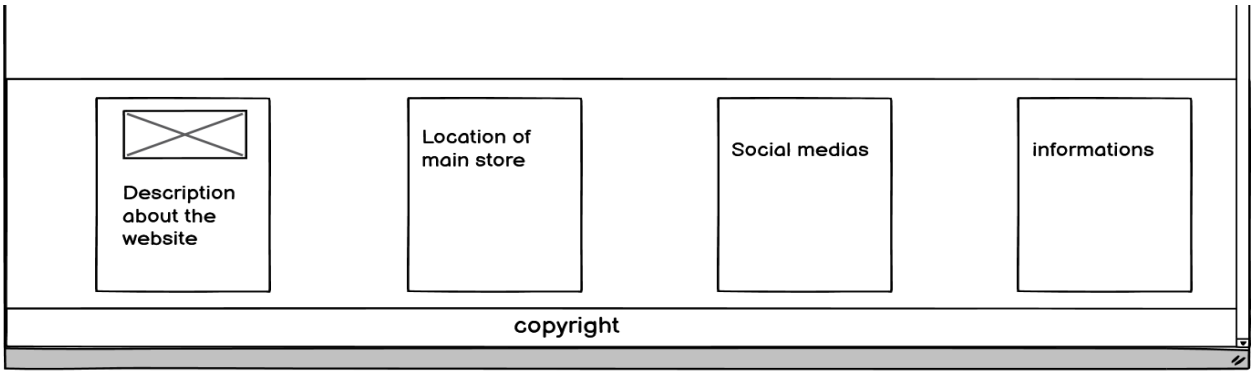

Figure 11 Wireframe: The footer section

Figure 12 The footer section after implementation of code

The footer section and the navigation menu are the same for every webpage of this website for a more subtle approach.

4.2 Wireframe for the 'Product' page

The 'Product' page consists of a navigation menu six rows of book lists each that fall under different categories like mystery/thriller, novels, etc. and a footer section (which is same as that in the home page).

- The first section containing navigation menu and list of books

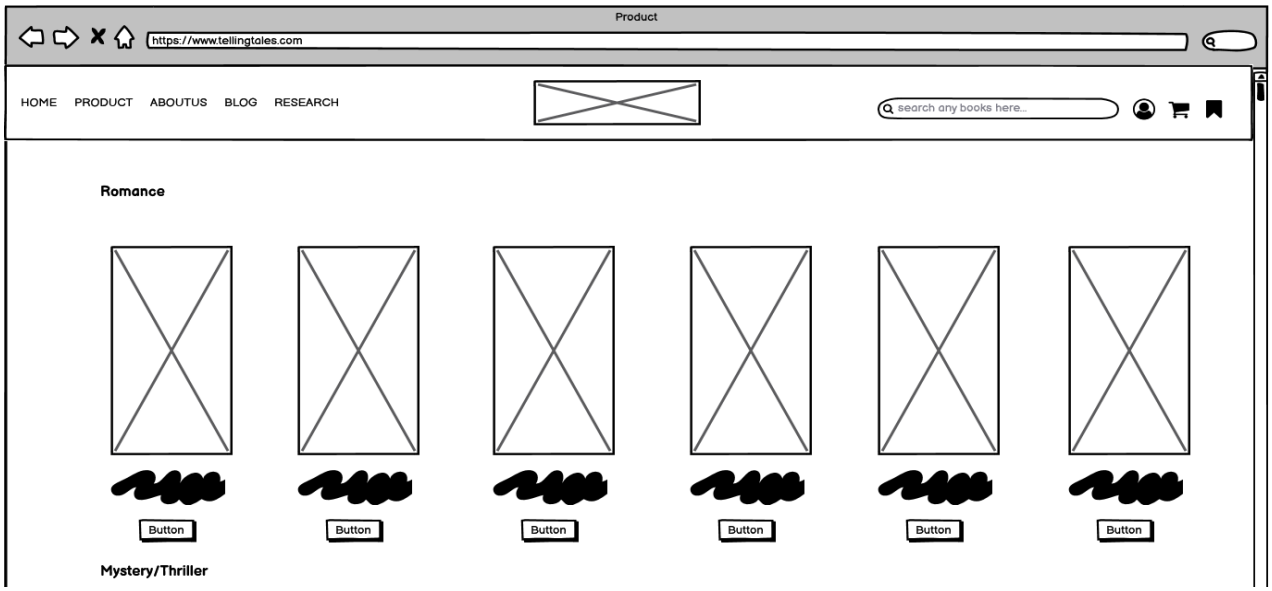

Figure 13 Wireframe of Product page: Section one

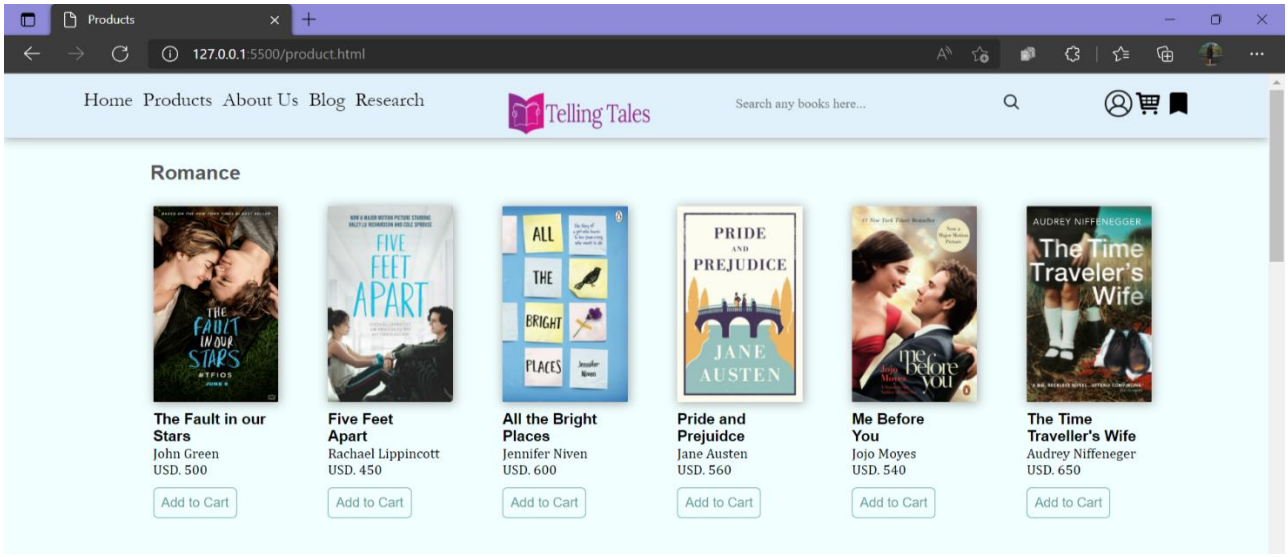

Figure 14 Product page: Section one after implementation of code

- Section containing more lists of books

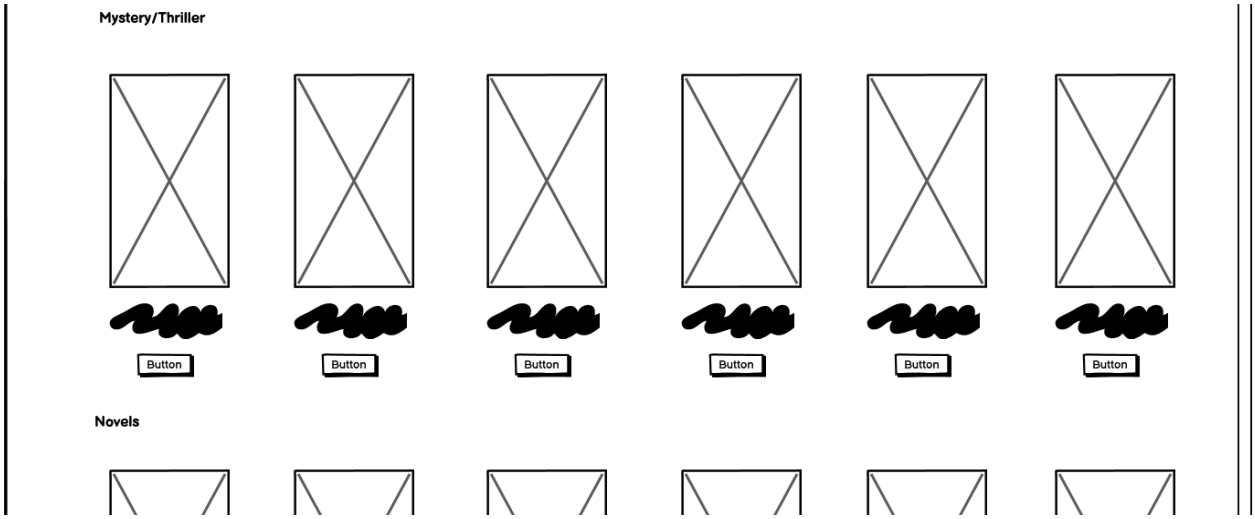

Figure 15 Wireframe of Product Page: More lists of books

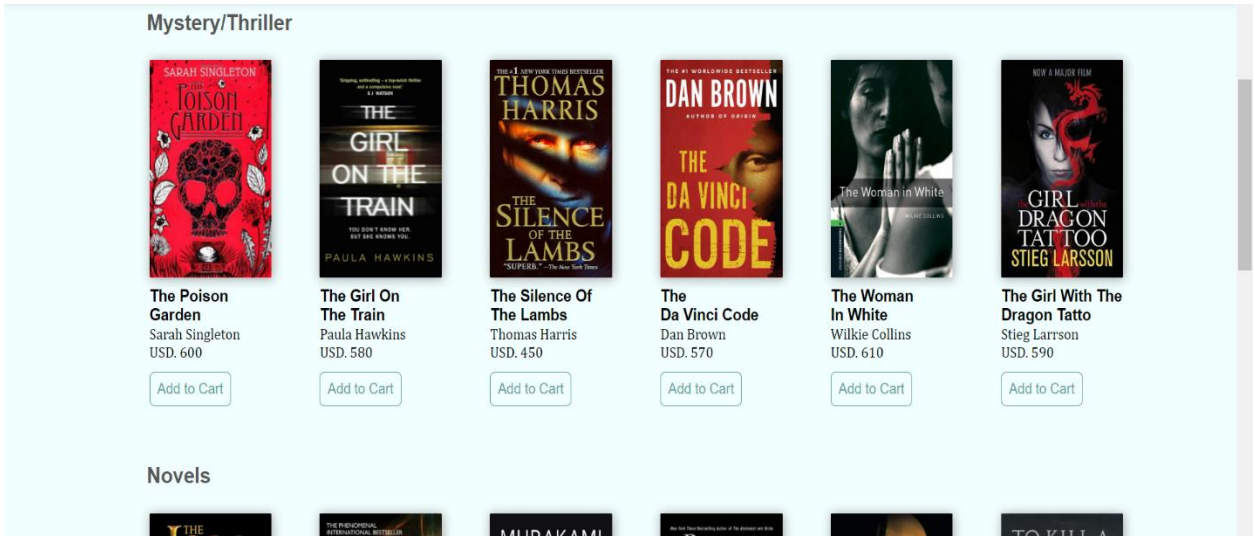

Figure 16 Product Page: More books lists after implementation of code

This page contains of similar four more book list rows.

4.3 Wireframe for the 'About Us' Page

The 'About us' page consists of a navigation menu, a banner image, a brief description about the website/store, list of board members, customer review and customer, book available and total stores count along with the footer.

- Section containing the navigation menu and the banner image

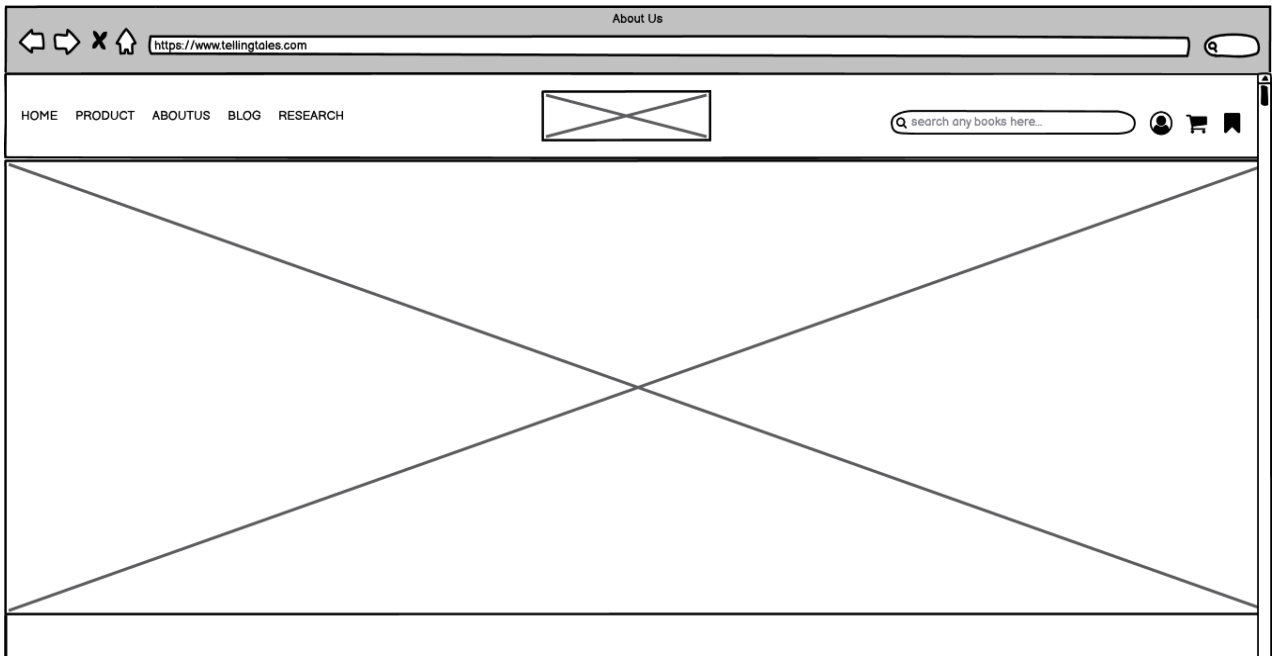

Figure 17 Wireframe of AboutUs Page: Navigation menu and banner image

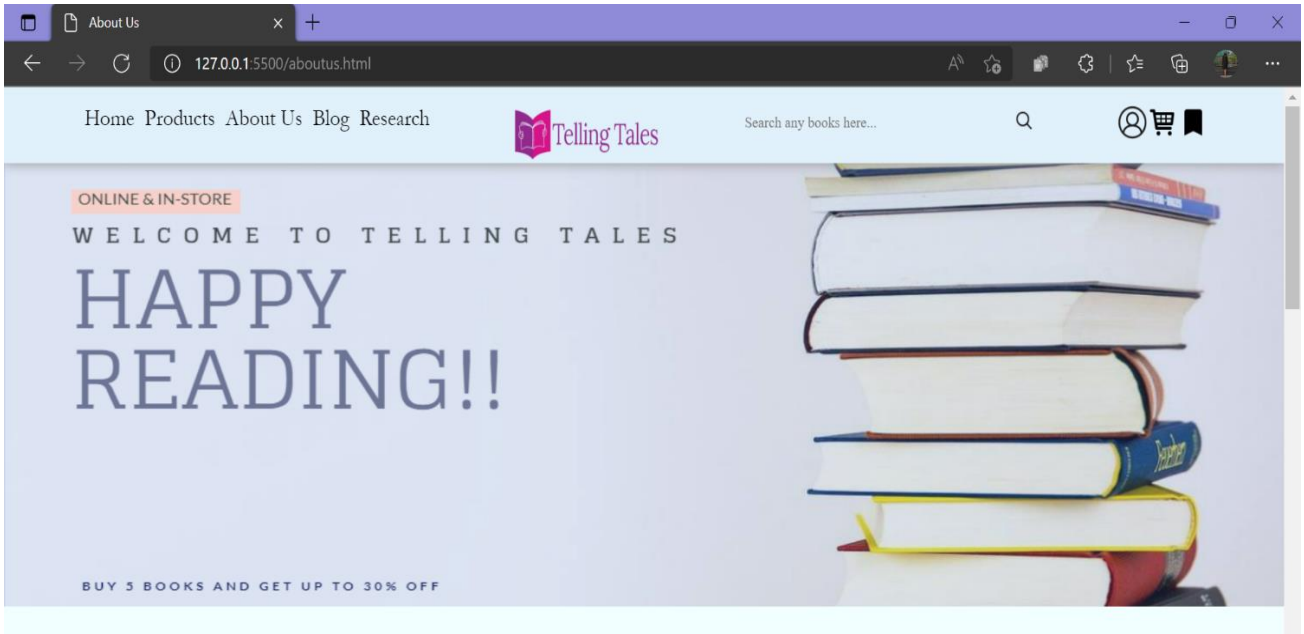

Figure 18 AboutUs Page: Nav menu & banner image after implementation of code

- Section containing description of the website/store

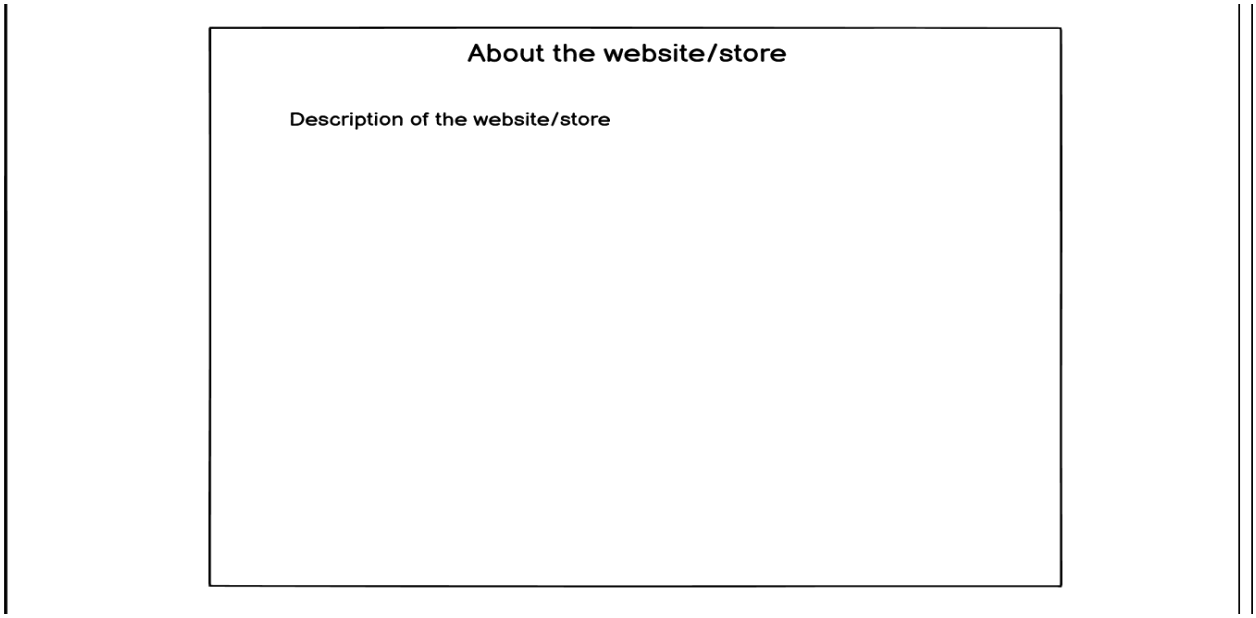

Figure 19 Wireframe of AboutUs Page: Description of the website/store

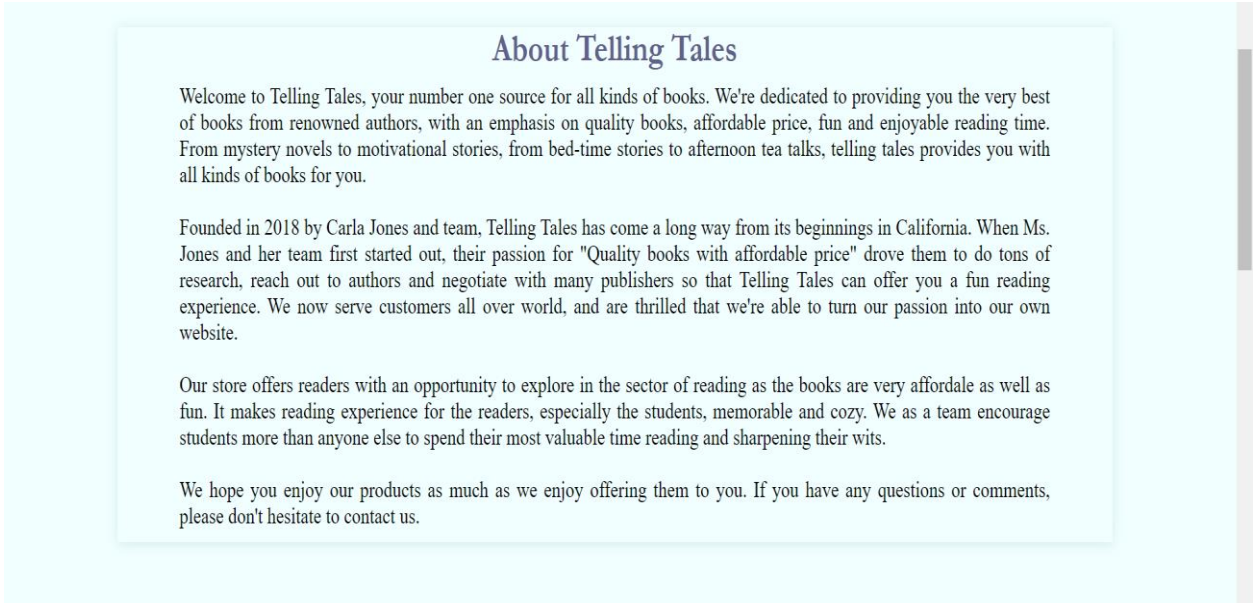

Figure 20 AboutUs Page: Description of website/store after implementation of code

- Section containing board members, customer review and customer count

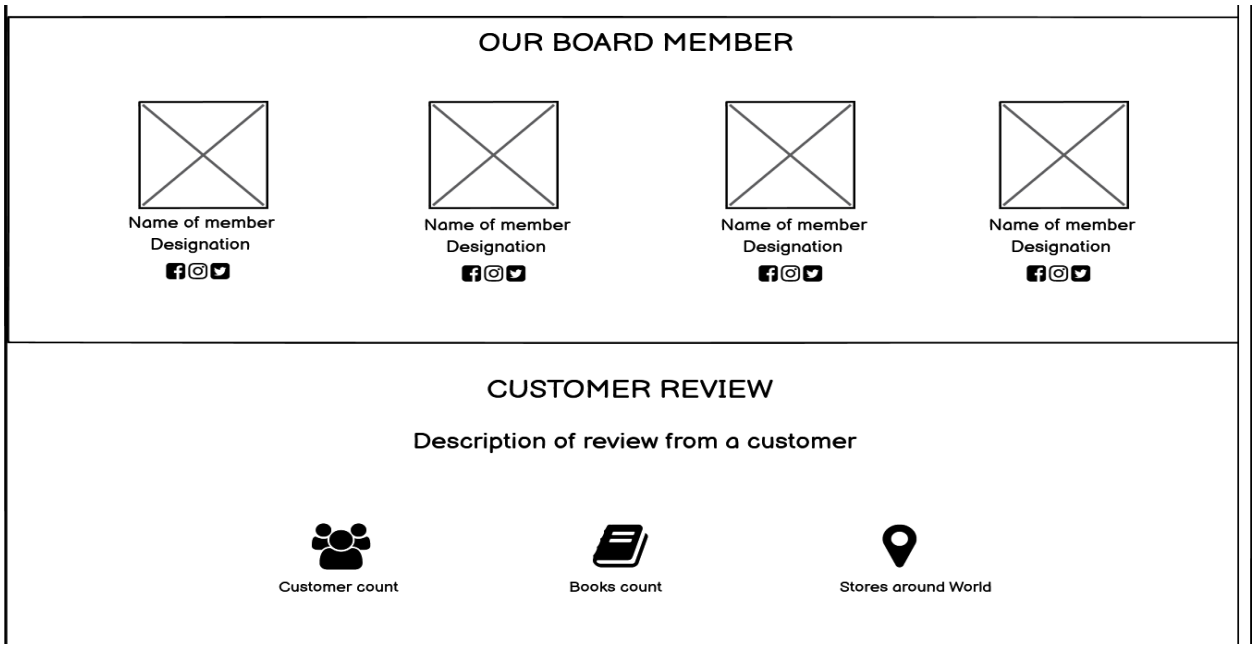

Figure 21 Wireframe of AboutUs Page: Board members, customer review & customer count

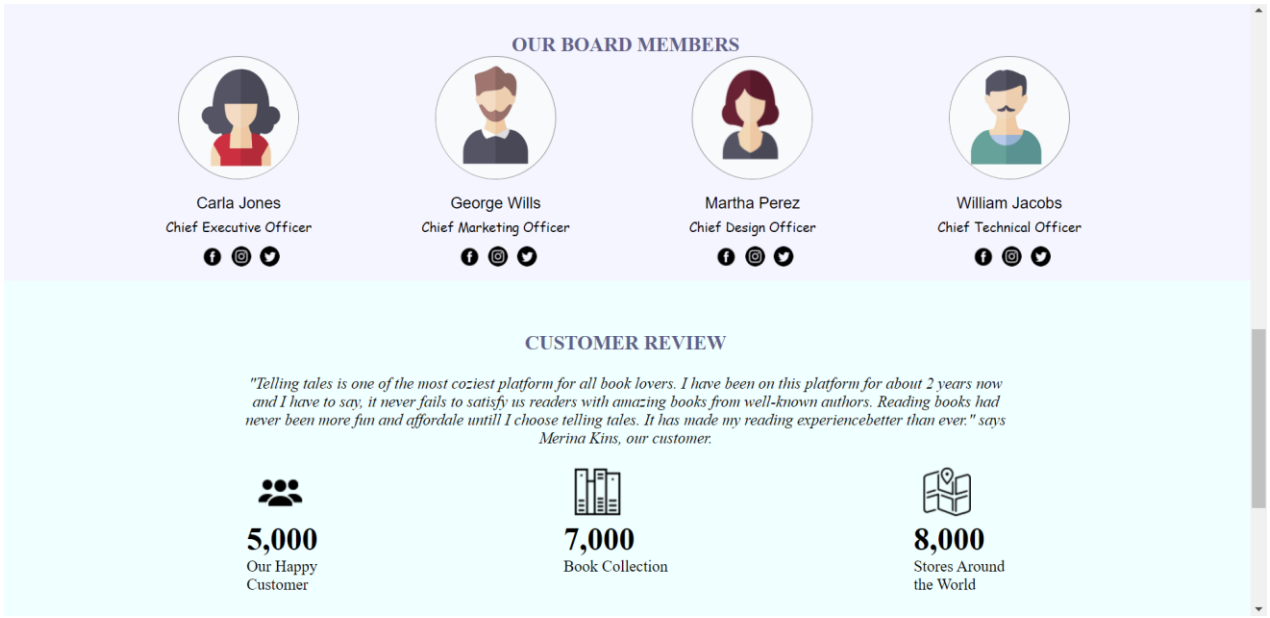

Figure 22 AboutUs Page: Board members, customer review & customer count after implementation of code

4.4 Wireframe for the 'Blog' Page

The 'Blog' page consists of two articles on the topic "Impact of Technology" and a form for those who want to submit similar articles of their own along with a navigation menu on the top and a footer at the bottom.

- Section containing the articles

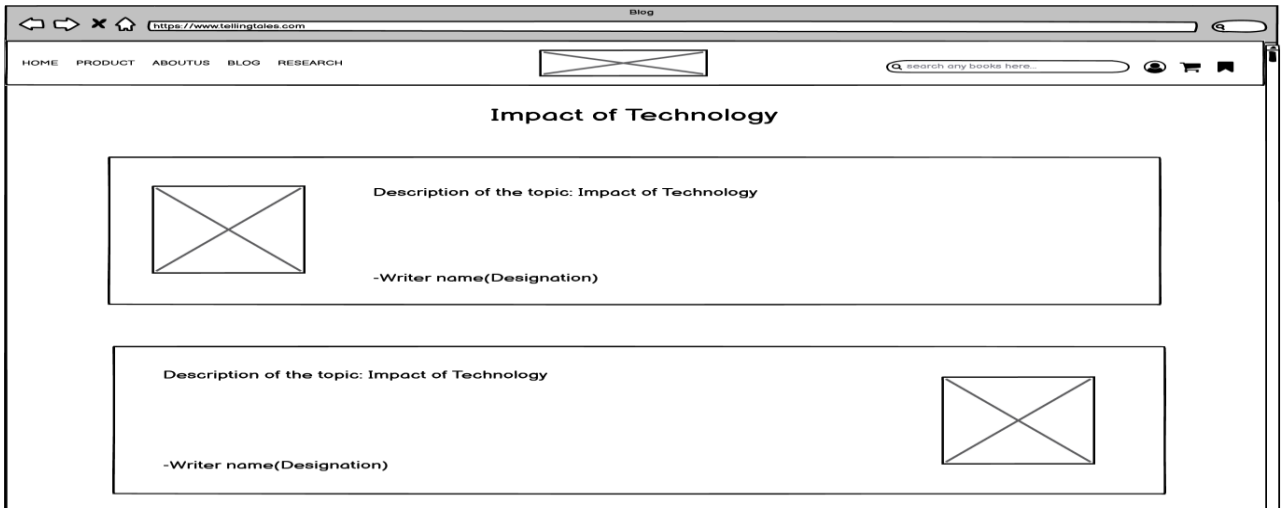

Figure 23 Wireframe of Blog Page: Section containing the articles

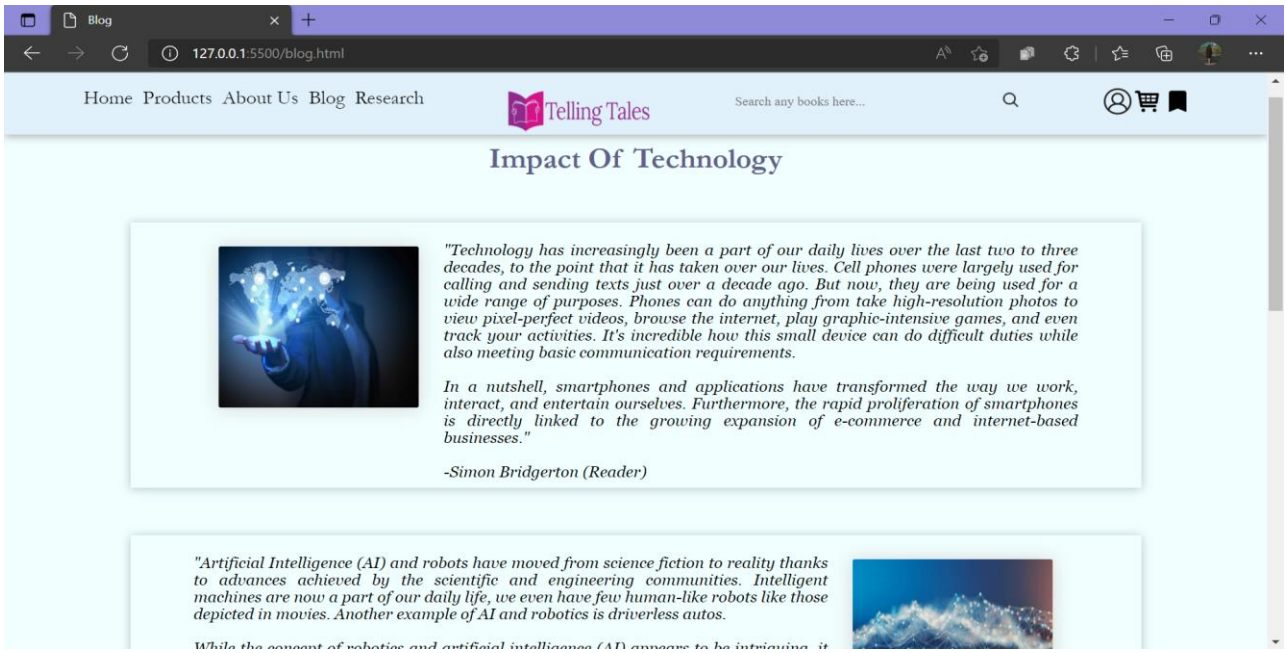

Figure 24 Blog Page: Section containing the articles after implementation of code

- Section containing the form

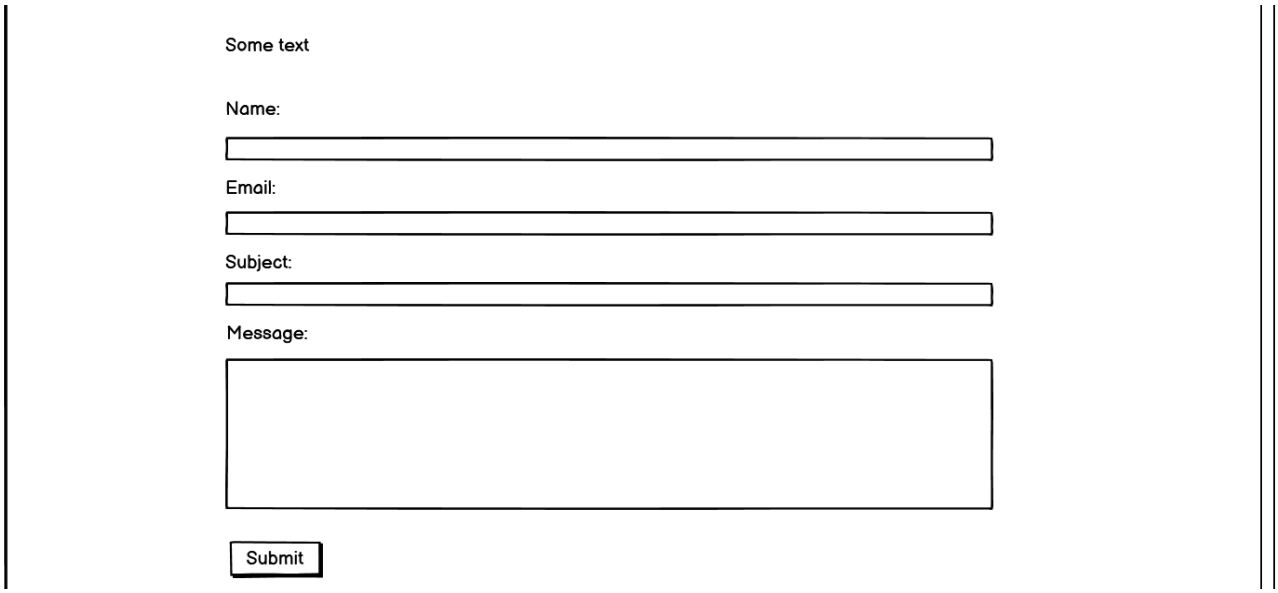

Figure 25 Wireframe of Blog Page: Section containing the form

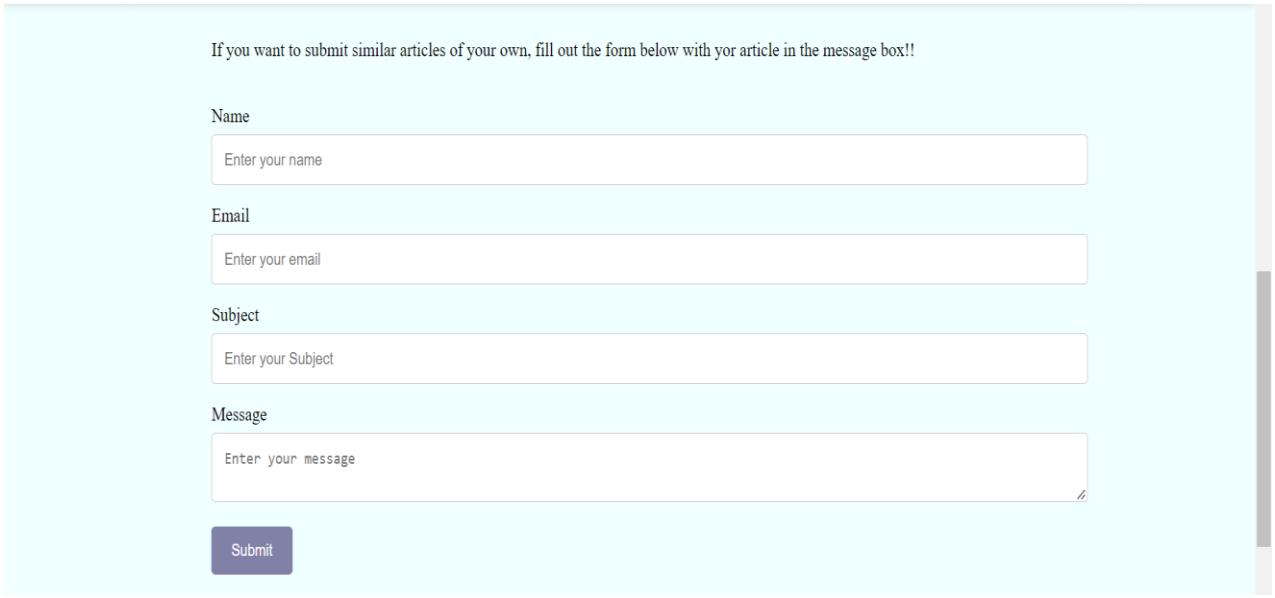

Figure 26 Blog Page: Section containing the form after implementation of code

4.5 Wireframe for the 'Research' page

The 'Research' page consists of a navigation menu, screenshots of the part of different website (and a brief description about them) from which this very own website was inspired and a footer section.

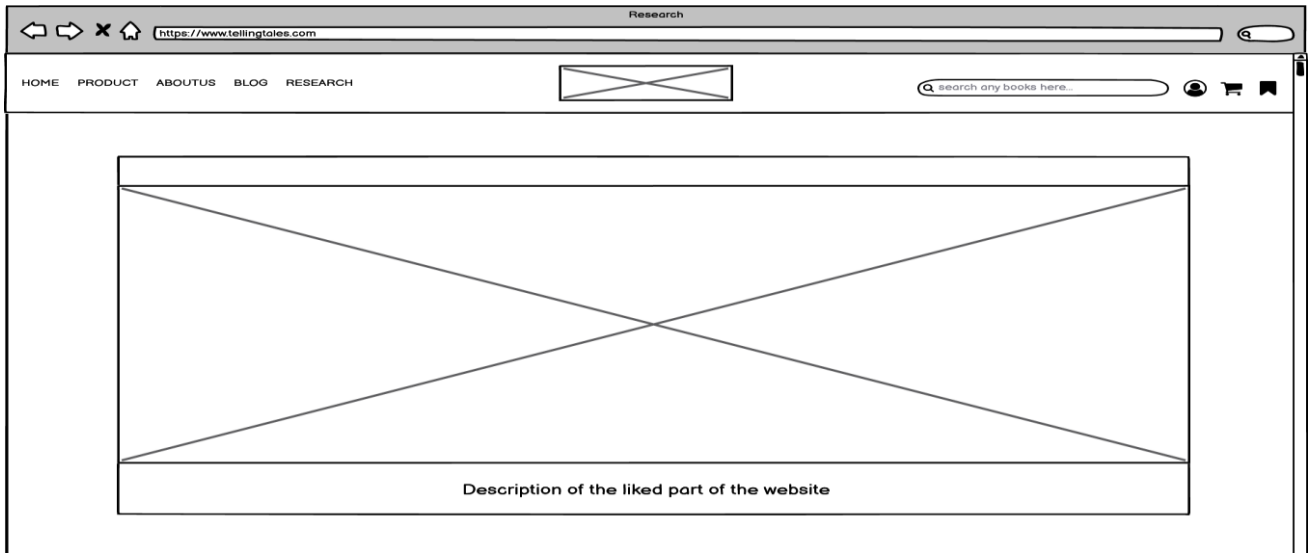

Figure 27 Wireframe of Research Page

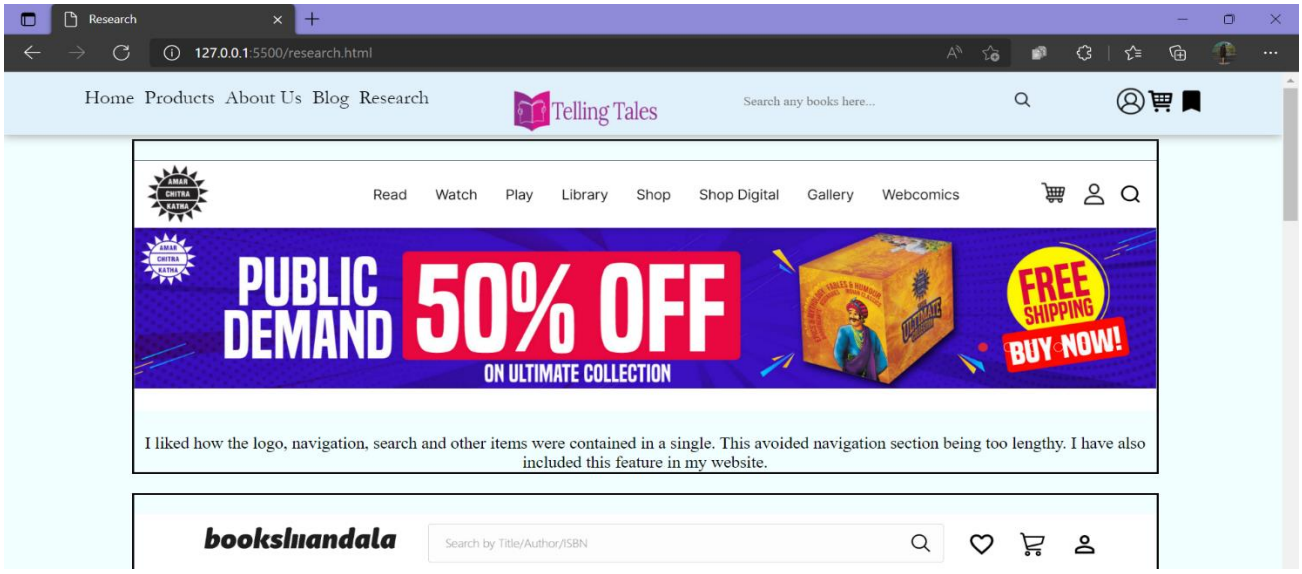

Figure 28 Research Page: After the implementation of code

This page consists of screenshots and description of other four more websites.

5. Testing

The process of checking the code in order to ensure its proper functionality is known as testing. Testing is done so that to find as well as detect the error. It plays a vital role in every project as it further helps in debugging the program. Debugging is the process of fixing the errors found in the program after testing.

To ensure the website I designed is working properly, I have done several types of testing which are briefed below:

5.1 Testing 1

Test number	1
Objective	To determine whether the link in the navigation menu is functioning or not.
Action	Visit to the website and click the link in the navigation menu.
Expected Result	The page written on the link should be opened.
Actual Result	The link opened.
Test Result	Test successful.

Table 1 Testing 1

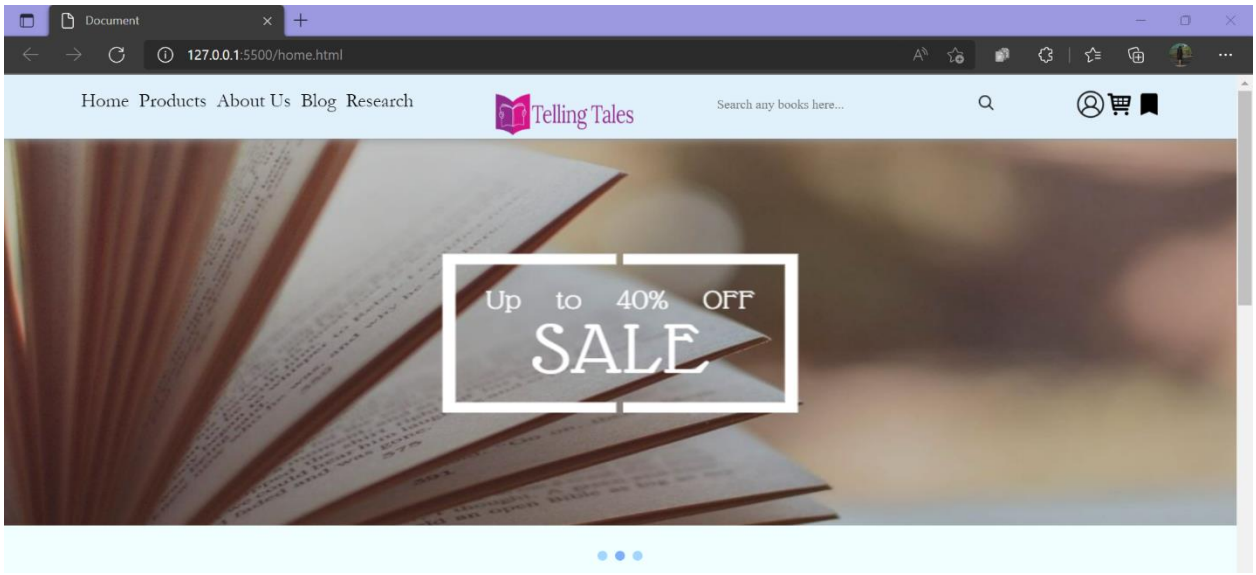

Figure 29 Before clicking the link in navigation menu

Figure 30 After clicking the link in navigation menu

5.2 Testing 2

Test number	2
Objective	To determine the hover on the ‘Add to Cart’ button
Action	Hover over the ‘Add to Cart’ button
Expected Result	The background color should change to black.
Actual Result	The background color changes to black.
Test Result	Test successful.

Table 2 Testing 2

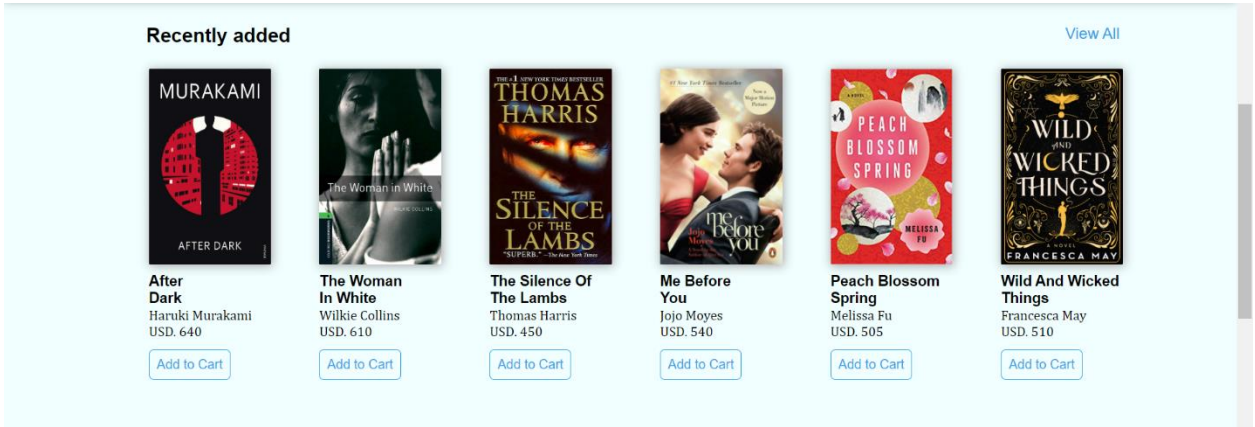

Figure 31 Before hovering 'Add to Cart' button

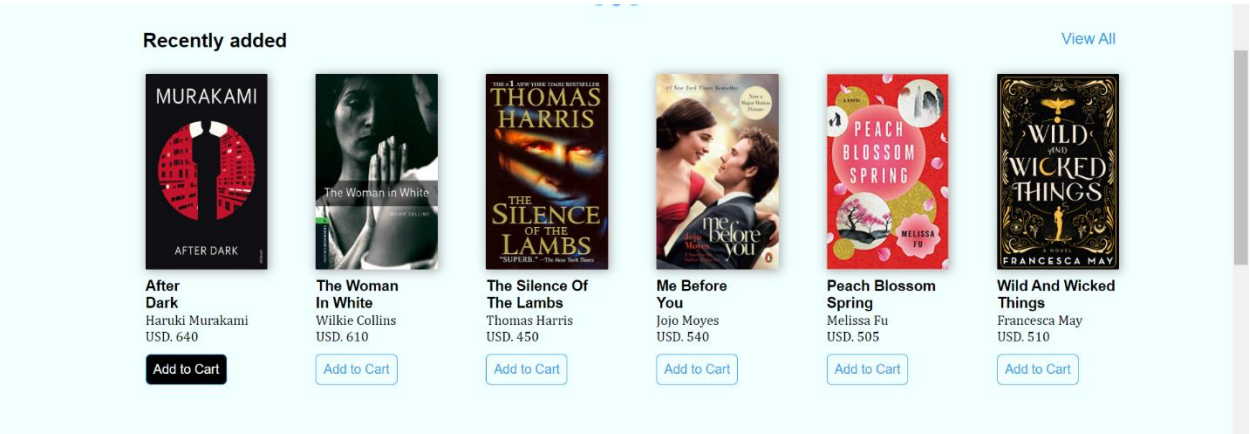

Figure 32 After hovering 'Add to Cart' button

5.3 Testing 3

Test number	3
Objective	To determine whether the ‘Blog’ link on the footer is functional or not.
Action	Visit the footer section of the website and click on ‘Blog’
Expected Result	The ‘Blog’ page should open.
Actual Result	The ‘Blog’ page opened.
Test Result	Test successful.

Table 3 Testing 3

Figure 33 Before clicking the 'Blog' on footer section

Figure 34 After clicking the 'Blog' on footer section

5.4 Testing 4

Test number	4
Objective	To determine whether the form on the ‘Blog’ page is functioning or not.
Action	Click the submit button with empty field.
Expected Result	A popup message should appear.
Actual Result	A popup message appeared.
Test Result	Test successful.

Table 4 Testing 4

Figure 35 Before submitting the empty form

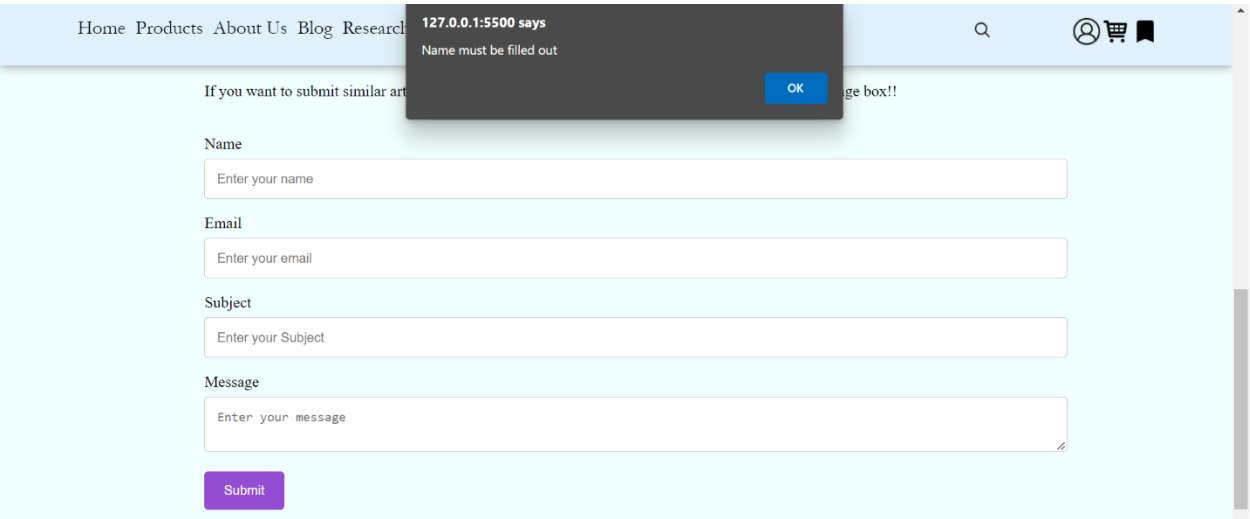

Figure 36 After submitting the empty form

5.5 Testing 5

Test number	5
Objective	To check if the contact form validation is working or not.
Action	Fill the contact form and click the submit button.
Expected Result	A popup message regarding form submitted should appear.
Actual Result	A popup message regarding form submitted appeared.
Test Result	Test successful.

Table 5 Testing 5

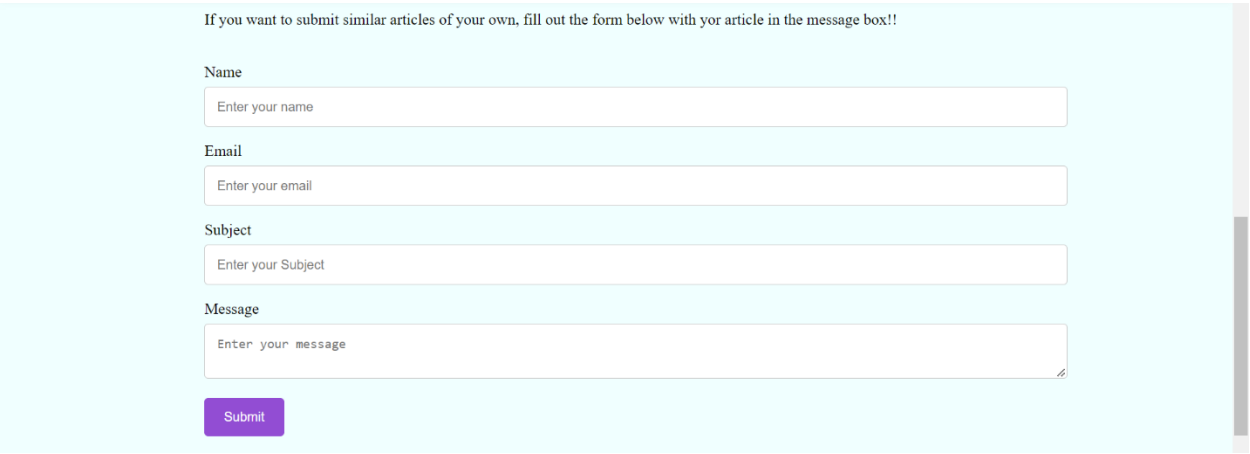

Figure 37 Before submitting the filled form

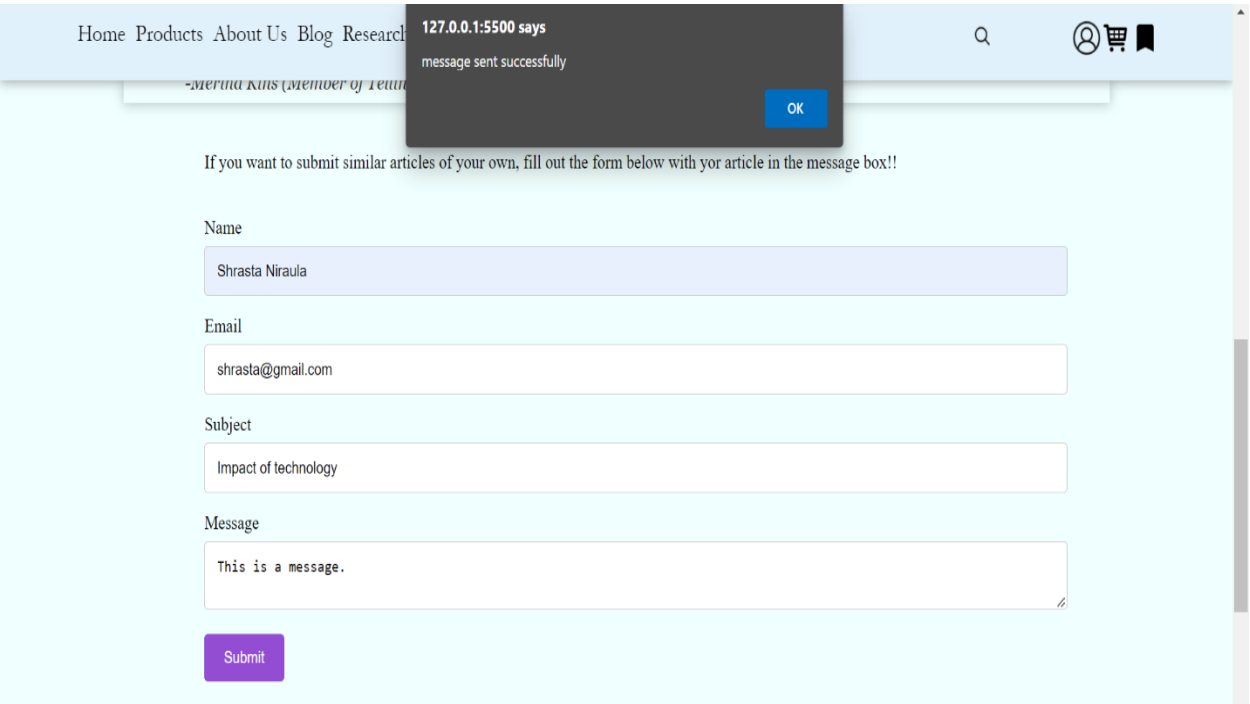

Figure 38 After submitting the filled form

6. Conclusion

This being the last coursework of our first semester and our module "Introduction to Information System" we as students are expected not to just submit our coursework but also to acknowledge fully about this very topic and also to grow as an individual. I find myself as a person freshly out of a cocoon ready to spread my wings ready to fly into other many interesting and knowledgeable journey of my life. I can't describe enough about how my life has changed during these past few months, not just good but also on bad terms. But as the good times gives us memories, the bad times are equally important as they give us lessons and makes us stronger.

Through this coursework, I was able to sharpen my knowledge about webpages, websites and the elements that comes together to build one. Learning about HTML, CSS and JavaScript along with their various elements, tags and syntaxes was first a hard time buy gradually as I became familiar with those, it was simply a matter of time when it was not an obstacle but fun. Looking at the capacity I hold to design and make so many beautiful changes to these websites only through some changes in the code made me realize that our life is also simply a program and the more we enjoy ourselves, the challenges become more of a fun game to cross every level than just a hurdle. It also made me realize how every decision we make leads us to our near future no matter how small our how big the decision is and we should rather enjoy our ability to shape our own future and work hard for it than to weep about what had happened a long time ago.

Every day is a new opportunity and every next day we can learn, unlearn and relearn so much more. Looking forward to many more of such learning.

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