

# Islington College



## Information System

### CC4002NA

#### Coursework 4

**Submitted by:**

Rajat Shrestha

17030954

Group: L1C5

Date: 20<sup>th</sup> may 2018

**Submitted to:**

Mr. Sukrit Shakya

Module Leader

Information System

**Contents:**

|                                    |           |
|------------------------------------|-----------|
| <b>1. Introduction:</b>            | <b>1</b>  |
| <b>2. Discussion and analysis:</b> | <b>3</b>  |
| 2.1. Web Development               | 3         |
| 2.2. Web Designing                 | 4         |
| 2.3. Tools                         | 5         |
| 2.3. Wireframe                     | 6         |
| 2.4. Screenshots                   | 11        |
| <b>3. Testing</b>                  | <b>16</b> |
| <b>4. Conclusion:</b>              | <b>22</b> |
| <b>References</b>                  | <b>23</b> |

**Table of Figures:**

|  |    |
|--|----|
| Figure 1: Wireframe- Home page .....                           | 6  |
| Figure 2: Wireframe- Portfolio .....                           | 7  |
| Figure 3: Wireframe- Blog .....                                | 8  |
| Figure 4: Wireframe- Research page .....                       | 9  |
| Figure 5: Wireframe- Contact page .....                        | 10 |
| Figure 6: Screenshot of home page .....                        | 11 |
| Figure 7: Screenshot of homepage after scrolling .....         | 11 |
| Figure 8: Screenshot of portfolio page .....                   | 12 |
| Figure 9: Screenshot of portfolio continued.....               | 12 |
| Figure 10: Screenshot of CV download button in portfolio ..... | 13 |
| Figure 11: Screenshot of blog page .....                       | 13 |
| Figure 12: Screenshot of blog page continued.....              | 14 |
| Figure 13: Screenshot of research page .....                   | 15 |
| Figure 14: Screenshot of referenced pages .....                | 15 |
| Figure 15: Screenshot of directory .....                       | 16 |
| Figure 16: Screenshot of opened page .....                     | 17 |
| Figure 17: Clicking portfolio page .....                       | 18 |
| Figure 18: Portfolio page opened .....                         | 18 |
| Figure 19: submitting an empty form.....                       | 19 |
| Figure 20: submitting an filled form .....                     | 20 |
| Figure 21: running home page with no other files .....         | 21 |

**Table of Tables:**

|                       |    |
|-----------------------|----|
| Table 1: Test 1 ..... | 16 |
| Table 2: Test 2 ..... | 18 |
| Table 3: Test 3 ..... | 19 |
| Table 4: Test 4 ..... | 20 |
| Table 5: Test 5 ..... | 21 |

## **1. Introduction:**

As this project involves HTML5, CSS and JavaScript to develop an individual portfolio website to demonstrate skill, understanding and creativity on web developing and web designing. This documentation contains all the required information regarding the project involving webpages given as 4th course work of Information Systems module. Some key words required to be understood are:

### **Web Technology:**

The method of communication of computers by the use of multimedia and markup languages is called web technology (Study.com, 2018).

### **HTML:**

Stands for Hyper Text Markup Language. It is the standard method of creating web content using tags to define its structure. (Jamsa, 2013).

### **HTML5:**

Latest version of HTML. It has added features that makes it more flexible to tackle new problems while being backward compatible to support older contents.

### **CSS:**

Stands for Cascading Style Sheets. It is styling language to give better aesthetics to the HTML documents. (McFarland, 2015). CSS3 is the latest evolution of CSS which has various new features.

### **JavaScript:**

A simple object oriented programming language which enhances the intractability of webpages. Modern Web browsers are compatible with it. (Ahmed, 2014).

This project involves the following:

**Features:**

- ✓ Contains five webpages interconnected to each other and can be easily navigated.
- ✓ Proper use of HTML structures, CSS designs and JavaScript functions.
- ✓ Storing all the files properly in a directory.
- ✓ Well-structured codes with proper comments.
- ✓ Demonstration of Internal, Inline and External CSS.

**Goals:**

- To go through some interesting sites.
- To design how the webpages should be.
- To create the page and fill it with contents.
- To design the page with proper aesthetics and functions.

The following set goals were strategically tackled by following objectives were made:

**Objectives:**

- To get inspired by some creative websites.
- To code the pages, stylesheets and scripts according to the wire frame.
- To test if the page is functioning.
- To document the process properly while working on the project

## **2. Discussion and analysis:**

This project given involves basic developing and designing of a webpage. The webpage so created is made to reflect our understanding on these fields as both is required on this project.

### **2.1. Web Development**

Web development includes structure, design and interaction handling by the use of Programming languages. Web developing creates a working page but doesn't prioritize the overall looks of the page. In summary web development is all about creating the overall internal mechanics of a webpage by programming languages (life wire, 2018). In this project HTML and JavaScript was used to structure and add interactions to the webpage.

#### **HTML**

This includes 5 html pages inter connected to each other. The HTML files structures the overall page and also adds content to the page. The pictures, texts, navigation bars, headings, headers, and footers are all added by the help of these HTML files. It is like a platform which have contents.

#### **JavaScript**

JavaScript file which adds functionality to the webpage. The JavaScript file contains four functions, to validate the form on contact page, show pop up message and to add typing effect to the homepage.

## 2.2. Web Designing

Web Designing is all about beauty and art of a webpage. It emphasizes the elements of webpage by making it more visible and attractive to look at. Web designing requires creativity and overall required skills in CSS, Photoshop, GUI, etc. A web designer is responsible for the direct impressions given out by the website to its target audience during their interactions by how the content is presented (life wire, 2018). This project involves use of CSS to make the web pages stylish by adding different CSS effects and tricks. CSS was used for follows:

- To add other types of fonts to the page.
- To add various background images and colours.
- To position the HTML elements properly.
- To adjust size of the elements by height and width.
- To add hover effect on the navigation bars and other elements so that it shows some transition effect while the cursor points at it.
- To add borders to some elements.
- To change font properties.
- To reuse the same class files over different pages.

In addition to this the photographs and images were also tuned and cropped so that it enhances the appearance of the page.



## 2.3. Tools

To accomplish the goals set by this project, a computer equipped following tools and software were used:

- i. Microsoft Word 2016  
Word processing software to prepare the report.
- ii. Sublime Text 3  
Text editor to edit texts and code.
- iii. Balsamiq Mockups 3  
Wireframe designing software.
- iv. Google Chrome  
To view and inspect the sources of html documents
- v. MS Paint  
To do some minor edits on image files

As the project was done on a small laptop with screen size 1366 x 768 pixels, it is highly recommended to use similar settings. This website is not made to be viewed by mobile devices such as smartphones and any other small screened devices.

## 2.3. Wireframe

Wireframe is basically a blueprint of the webpage which contains all the main information of the page. It involves representing the elements in a page in form of a simple model. It makes the development and designing of website more stress-free (Mockplus, 2017). The wireframes that was created for this project are as follows.

### Home

The home page consists of a navigation bar and a simple text in front of a background image.

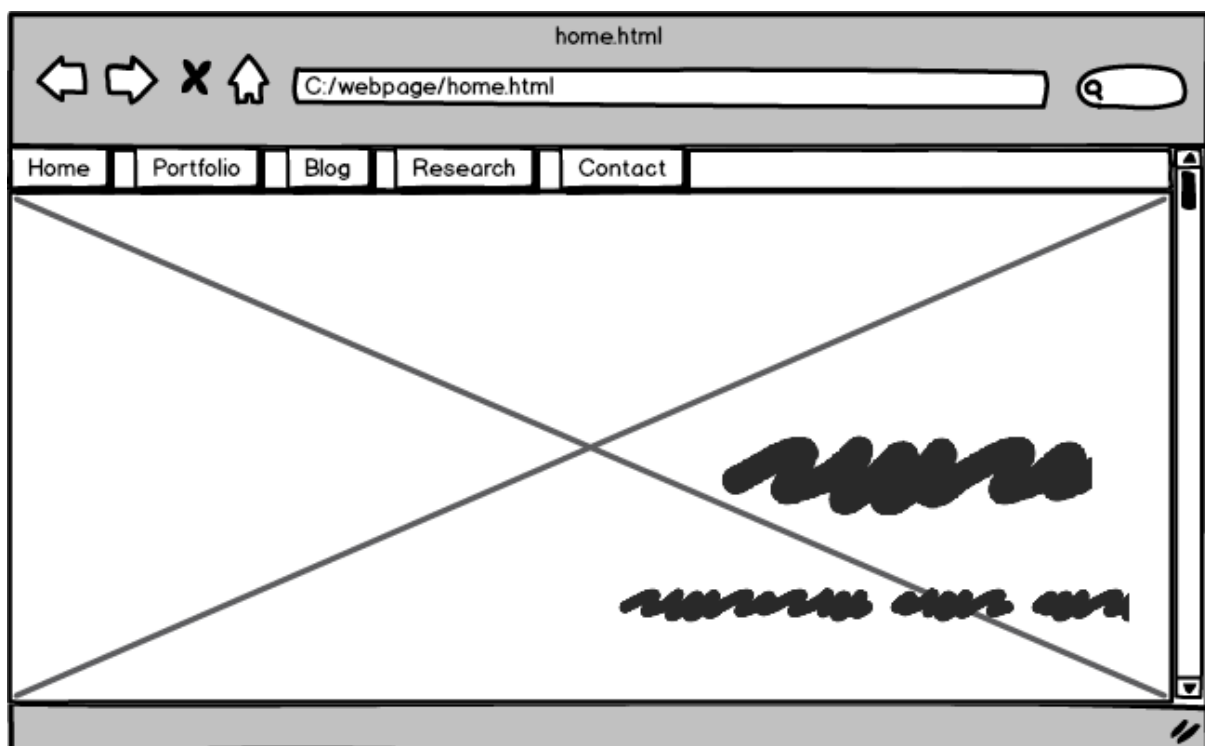


Figure 1: Wireframe- Home page

## Portfolio

The portfolio consists of lots of images and sections filled with texts. Some of these elements have hover effect which will change its appearance upon cursor placement.

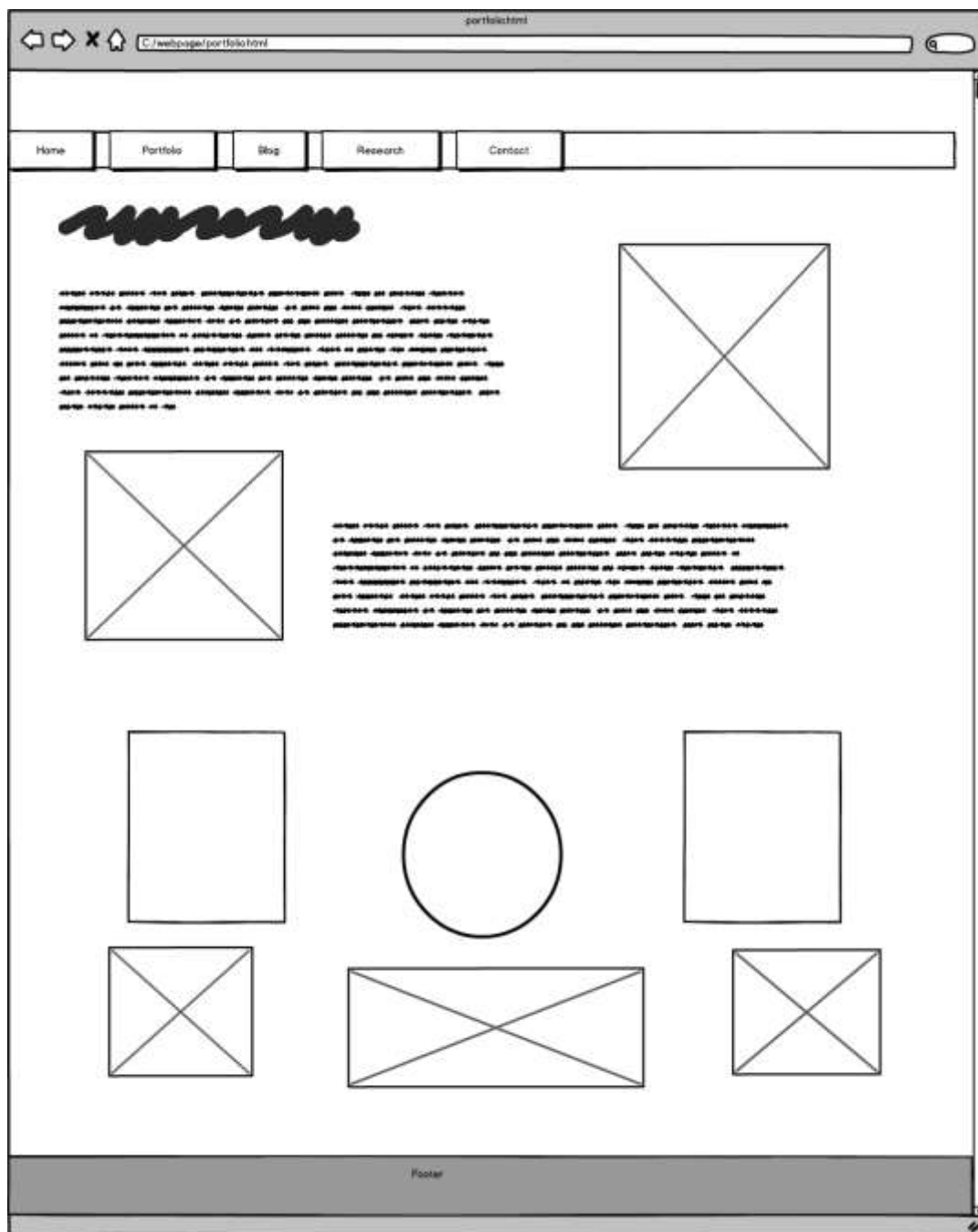


Figure 2: Wireframe- Portfolio

## Blog

The blog also consists of images and sections filled with texts.



Figure 3: Wireframe- Blog

## Research

The images, description, headings and links to the websites are contained in this page.

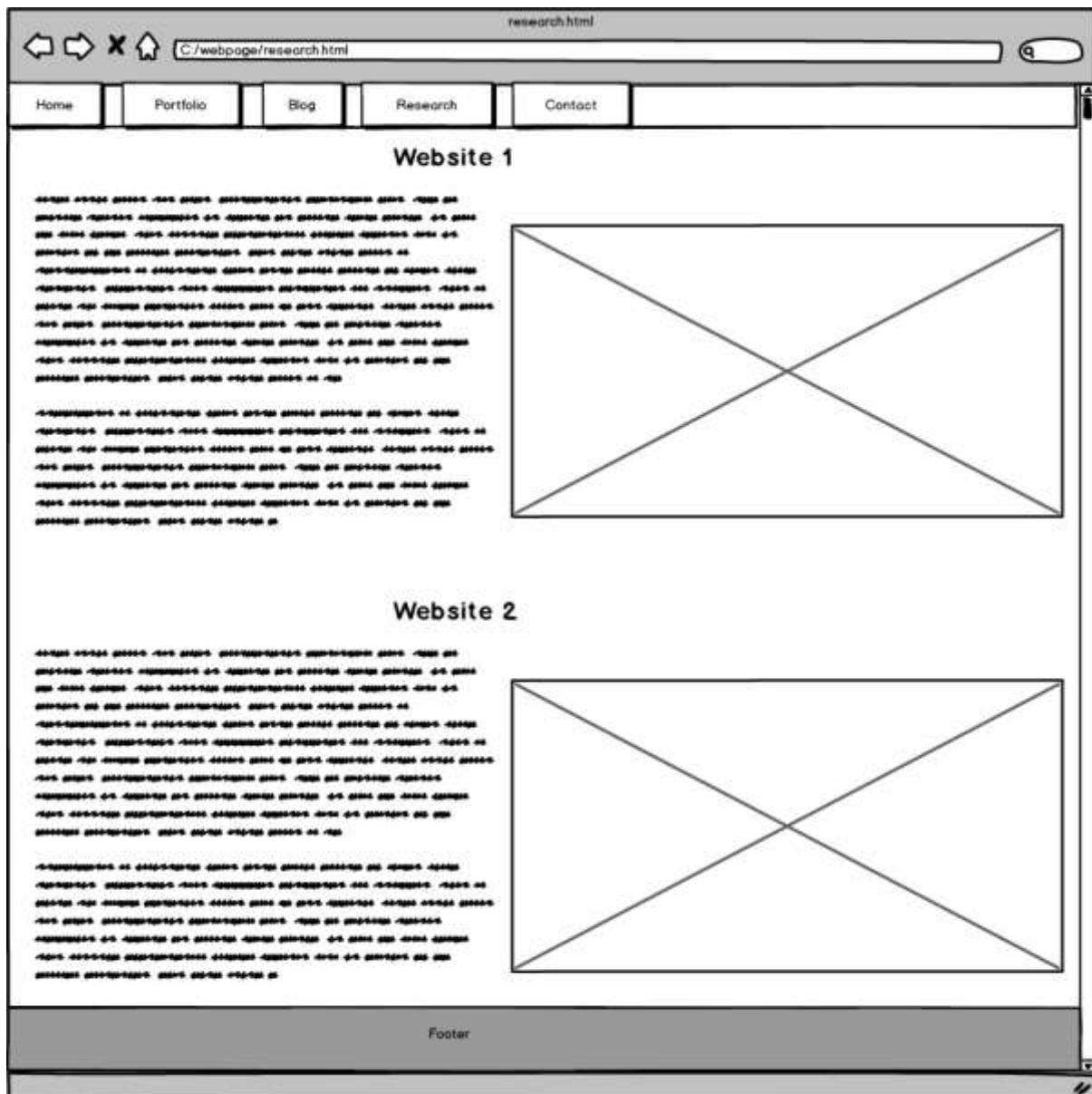


Figure 4: Wireframe- Research page

## Contact

The contact page has a form which the user has to fill out and gives out alert otherwise it will display an error message.

The wireframe shows a web browser window with the address bar displaying 'C:/webpage/contact.html'. The browser's title bar says 'contact.html'. The page has a navigation bar with links: Home, Portfolio, Blog, Research, and Contact. The main content area is mostly empty, with a large 'X' drawn across it. On the right side, there is a contact form. The form includes four labels (represented by scribbles) corresponding to the following input fields: a text box for 'name', a text box for 'email', a text box for 'age', and a text area for a message. Below the 'age' field, there are two radio buttons labeled 'male' and 'female'. The footer of the page contains the word 'Footer'.

Figure 5: Wireframe- Contact page

## 2.4. Screenshots

The screenshots of the webpage to compare with wireframes:

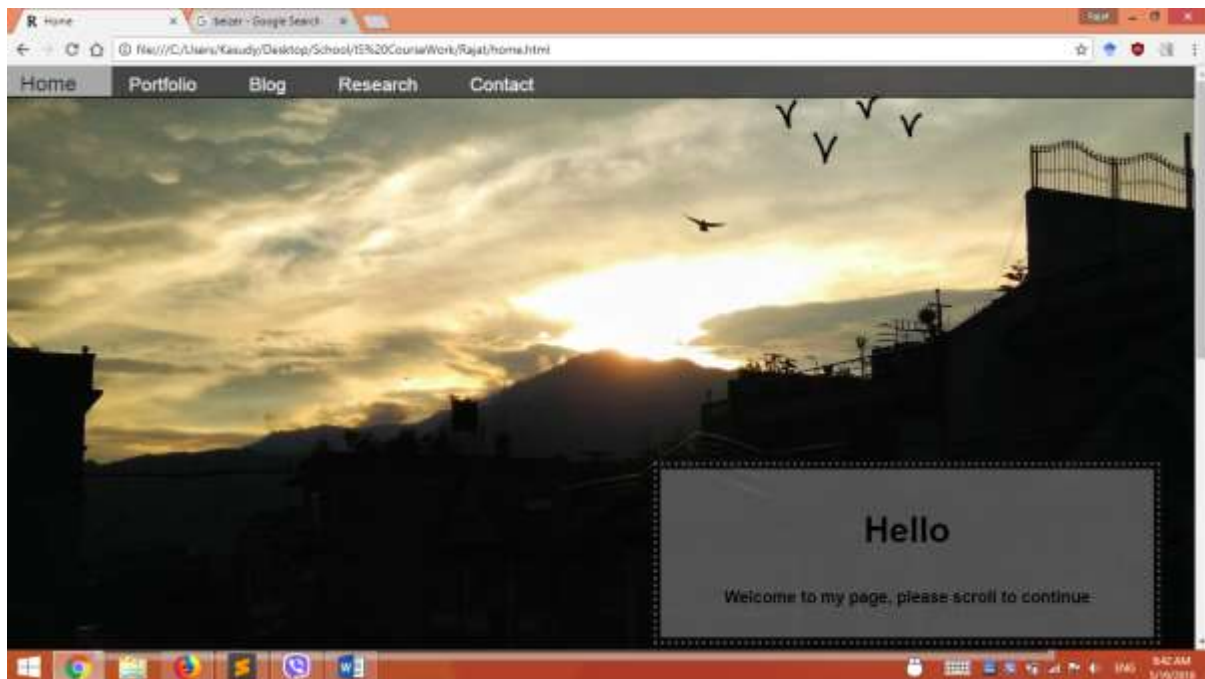


Figure 6: Screenshot of home page

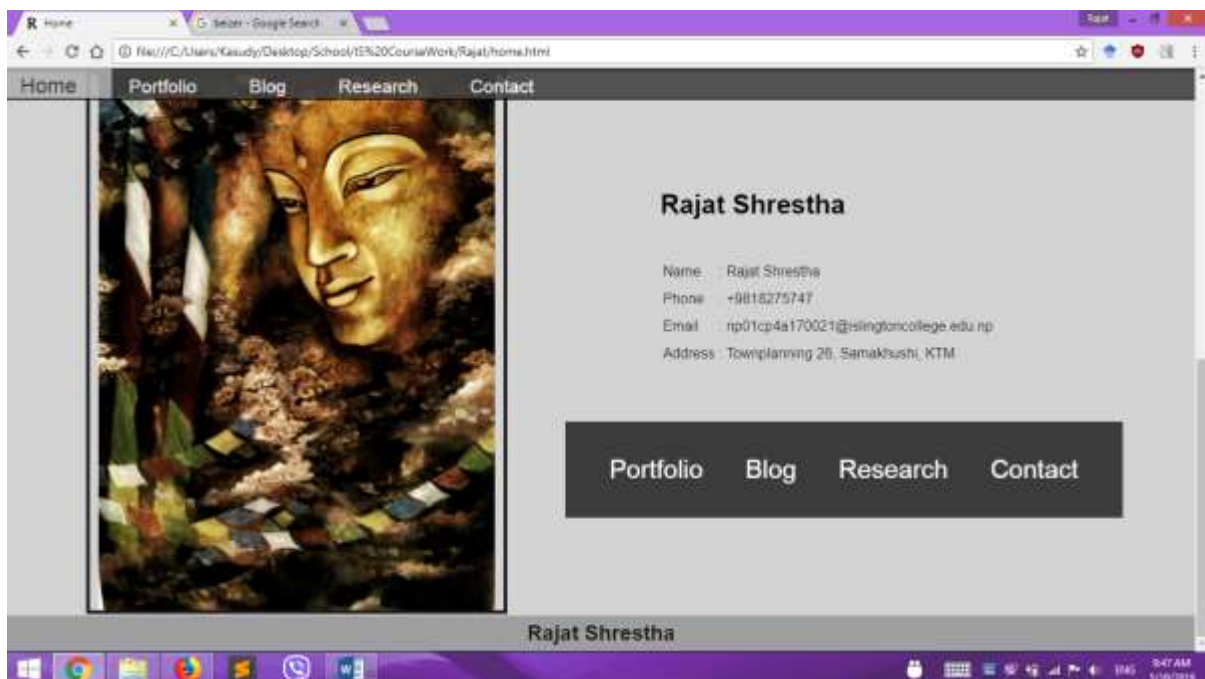


Figure 7: Screenshot of homepage after scrolling



Figure 8: Screenshot of portfolio page

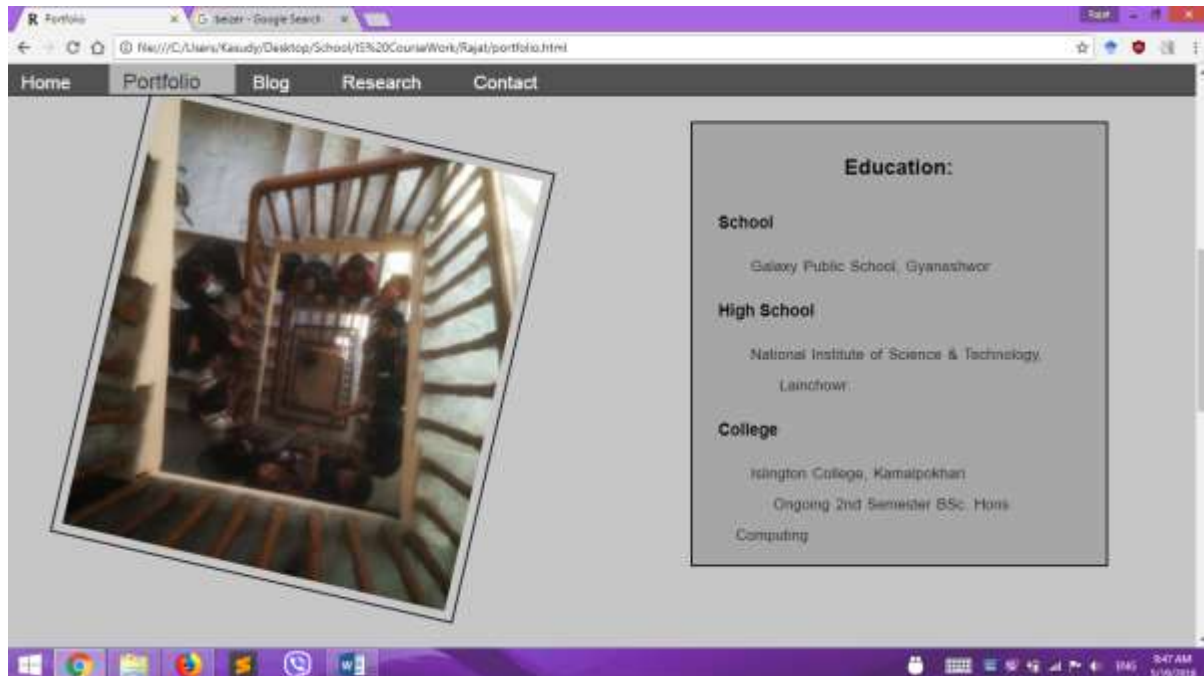


Figure 9: Screenshot of portfolio continued





Figure 10: Screenshot of CV download button in portfolio



Figure 11: Screenshot of blog page

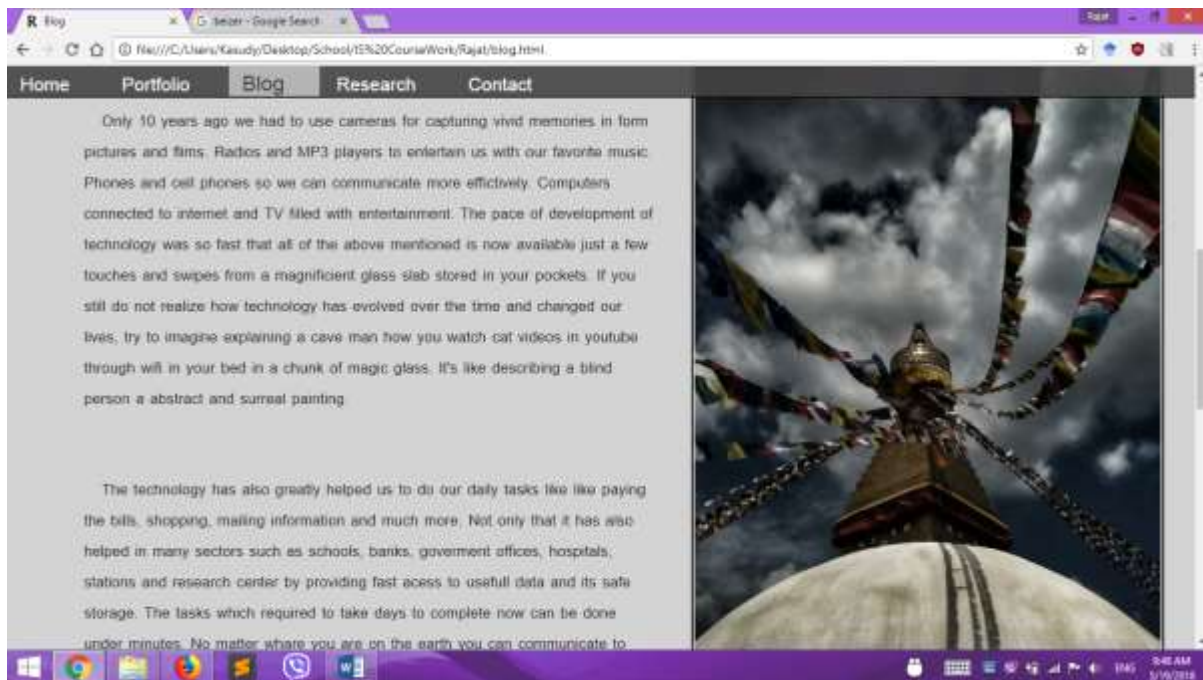


Figure 12: Screenshot of blog page continued

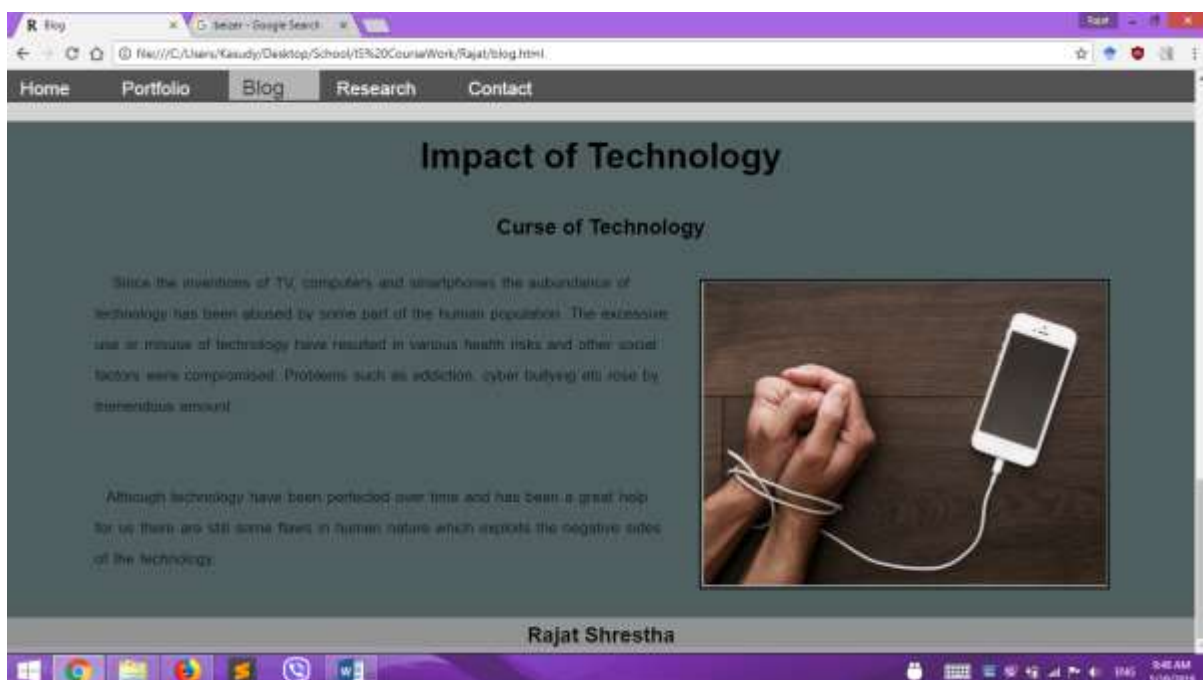




Figure 13: Screenshot of research page

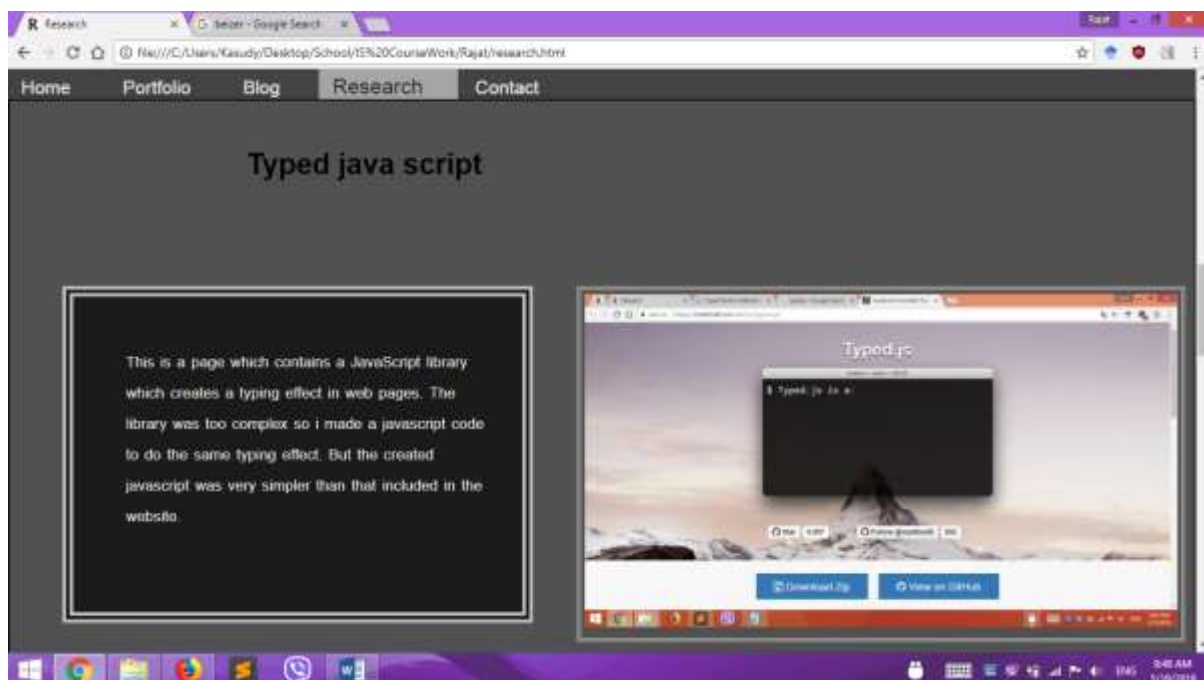


Figure 14: Screenshot of referenced pages

### 3. Testing

To see if the final code runs fluidly we must go through several tests to find out problems and solve them. Black box testing is the method to run a program without knowing the internal mechanisms (Whittaker & Thomason, 1994). In this section the prepared code is tested extensively.

Table 1: Test 1

|                 |                                       |
|-----------------|---------------------------------------|
| <b>Test No</b>  | 1                                     |
| Action          | Starting the code from the directory. |
| Expected Result | The home page will open.              |
| Actual result   | The home page was opened.             |
| Test Result     | The test was successful.              |

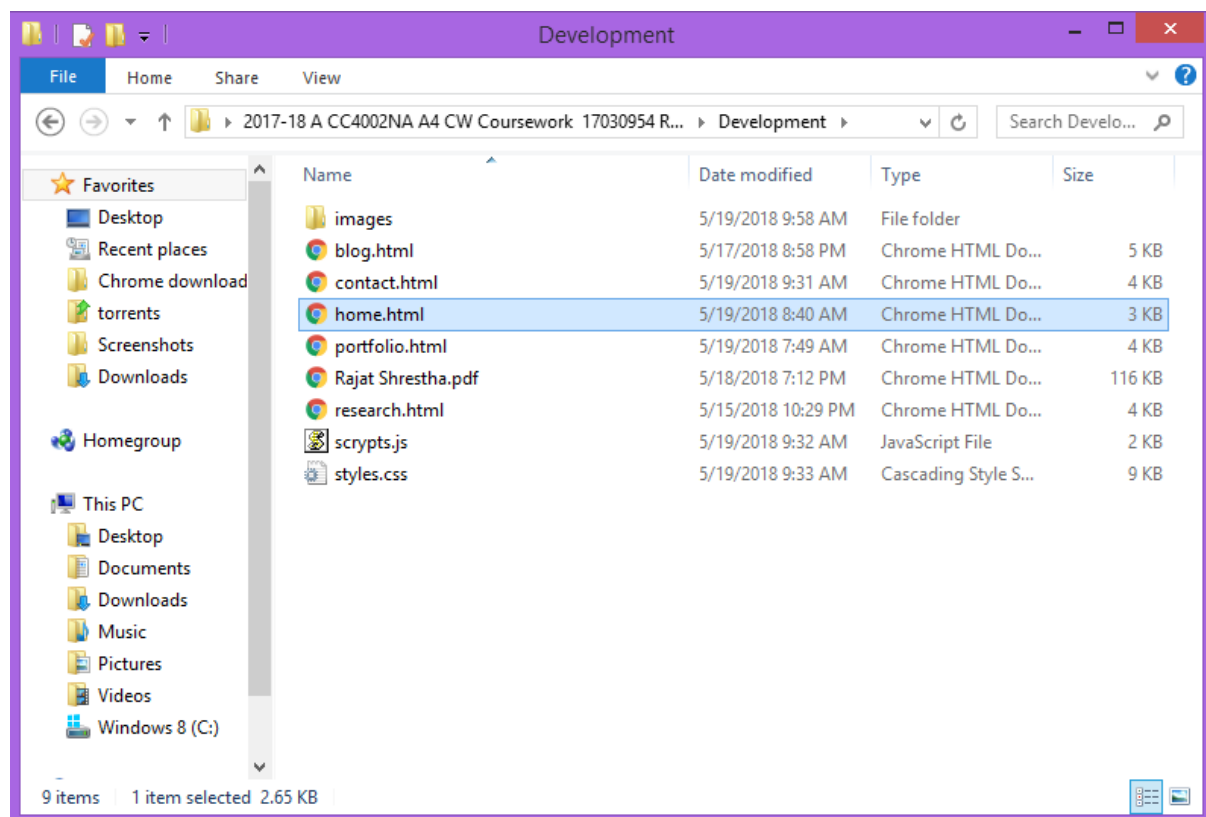


Figure 15: Screenshot of directory

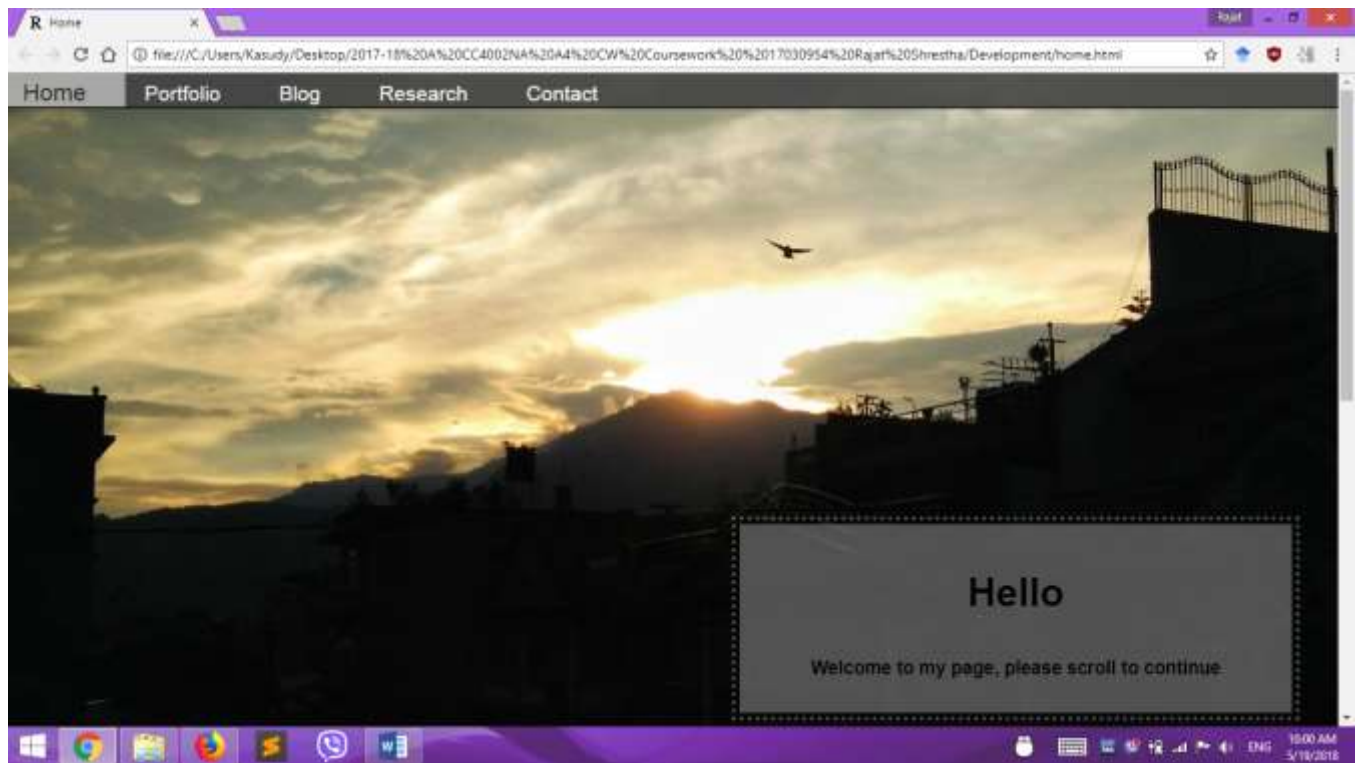


Figure 16: Screenshot of opened page



Table 2: Test 2

|                        |                                    |
|------------------------|------------------------------------|
| <b>Test No</b>         | 2                                  |
| <b>Action</b>          | Navigating through navigation bar. |
| <b>Expected Result</b> | Linked pages should open.          |
| <b>Actual result</b>   | Linked page was opened.            |
| <b>Test Result</b>     | The test was successful.           |

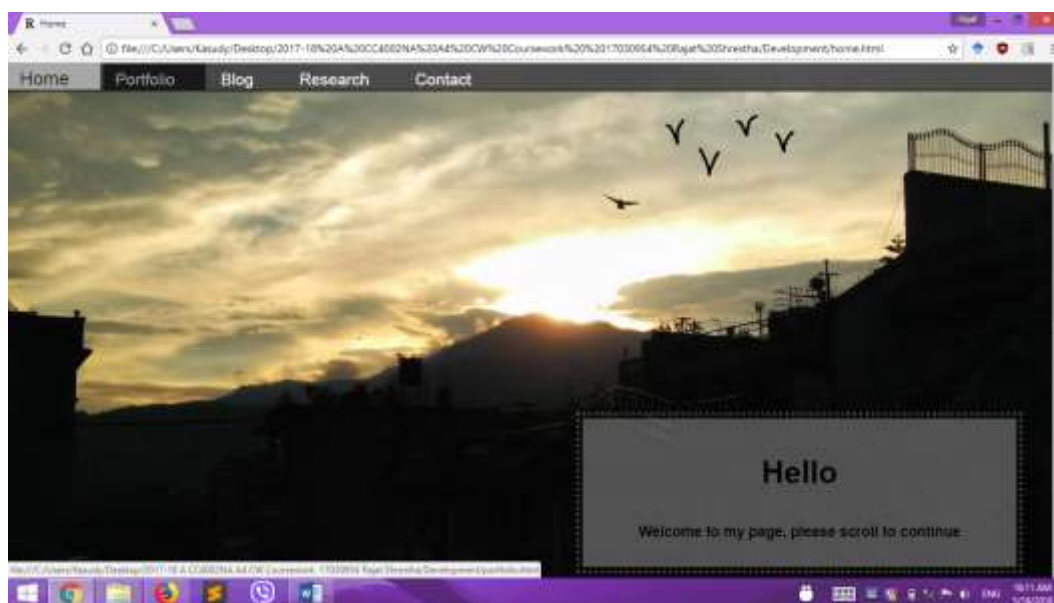


Figure 17: Clicking portfolio page

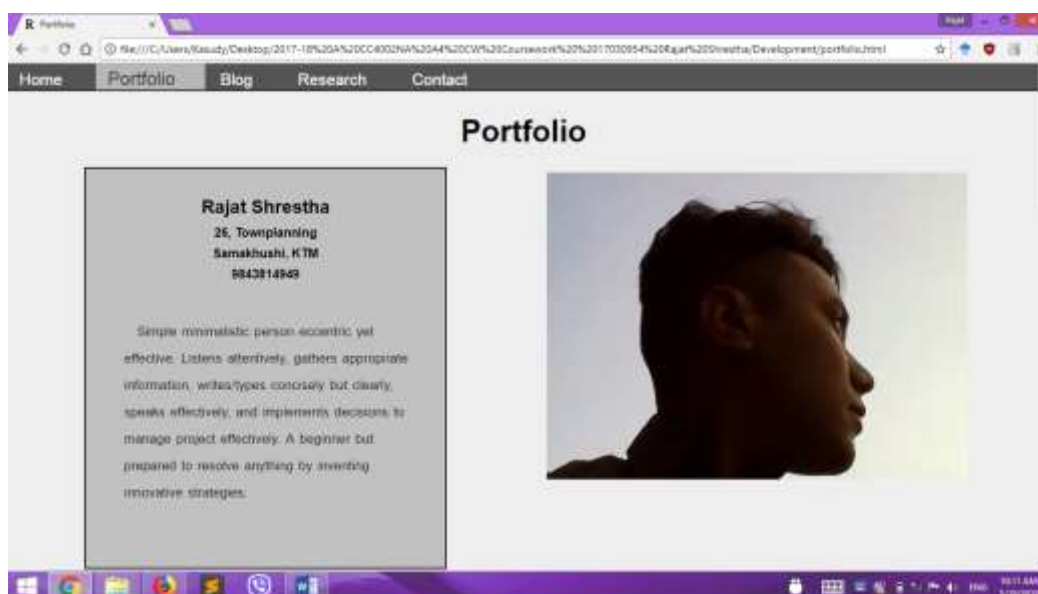


Figure 18: Portfolio page opened

Table 3: Test 3

|                 |   |
|-----------------|---|
| Test No         | 3                                       |
| Action          | Submitting a blank form in contact page |
| Expected Result | Pop up should indicate empty fields.    |
| Actual result   | Pop up warned about empty fields.       |
| Test Result     | The test was successful.                |

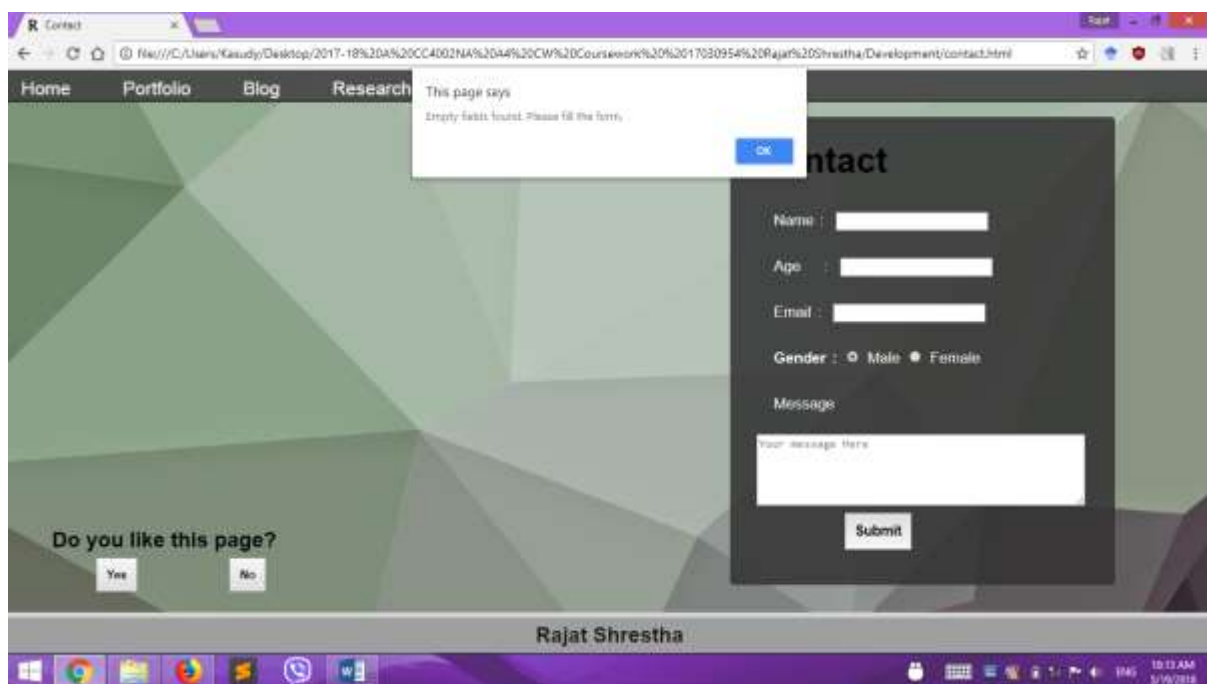


Figure 19: submitting an empty form

Table 4: Test 4

|                 |  |
|-----------------|--|
| Test No         | 4  |
| Action          | Submitting a form in contact page                |
| Expected Result | Pop up should indicate the form being submitted. |
| Actual result   | Pop up indicated the comment was submitted.      |
| Test Result     | The test was successful.                         |

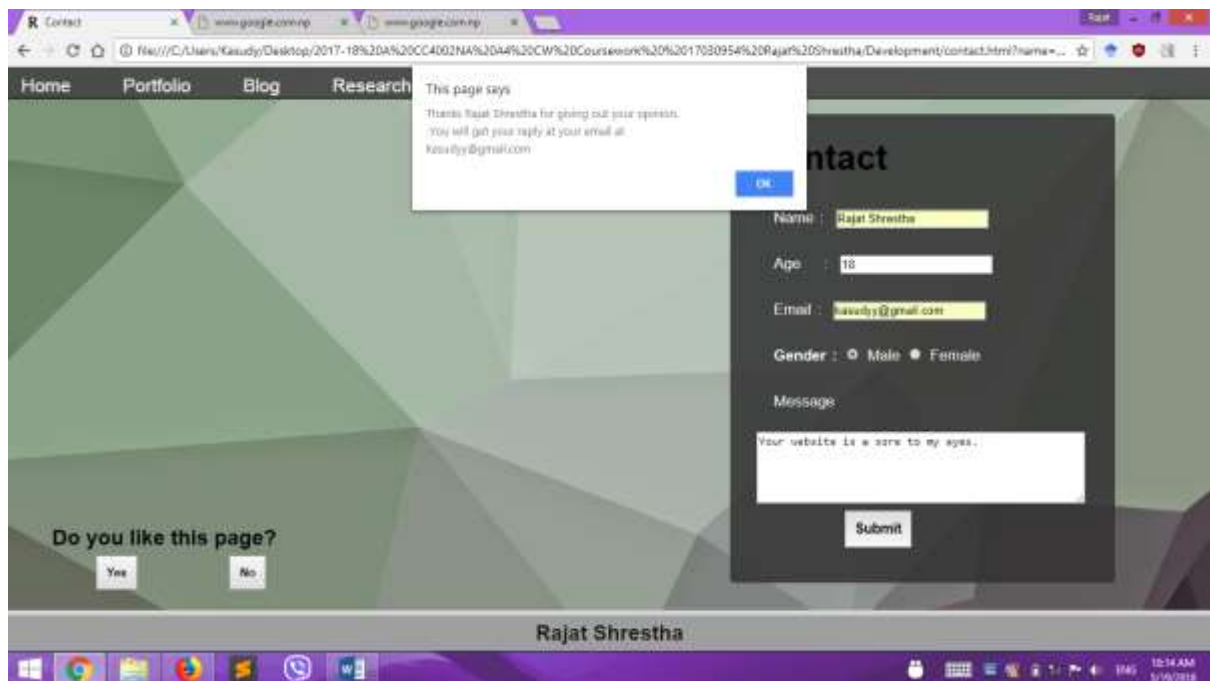


Figure 20: submitting an filled form



Table 5: Test 5

|                 |  |
|-----------------|--|
| <b>Test No</b>  | 5  |
| Action          | Starting the code without any other files. |
| Expected Result | The page will be incomplete.               |
| Actual result   | The home page was incomplete.              |
| Test Result     | The test was successful.                   |

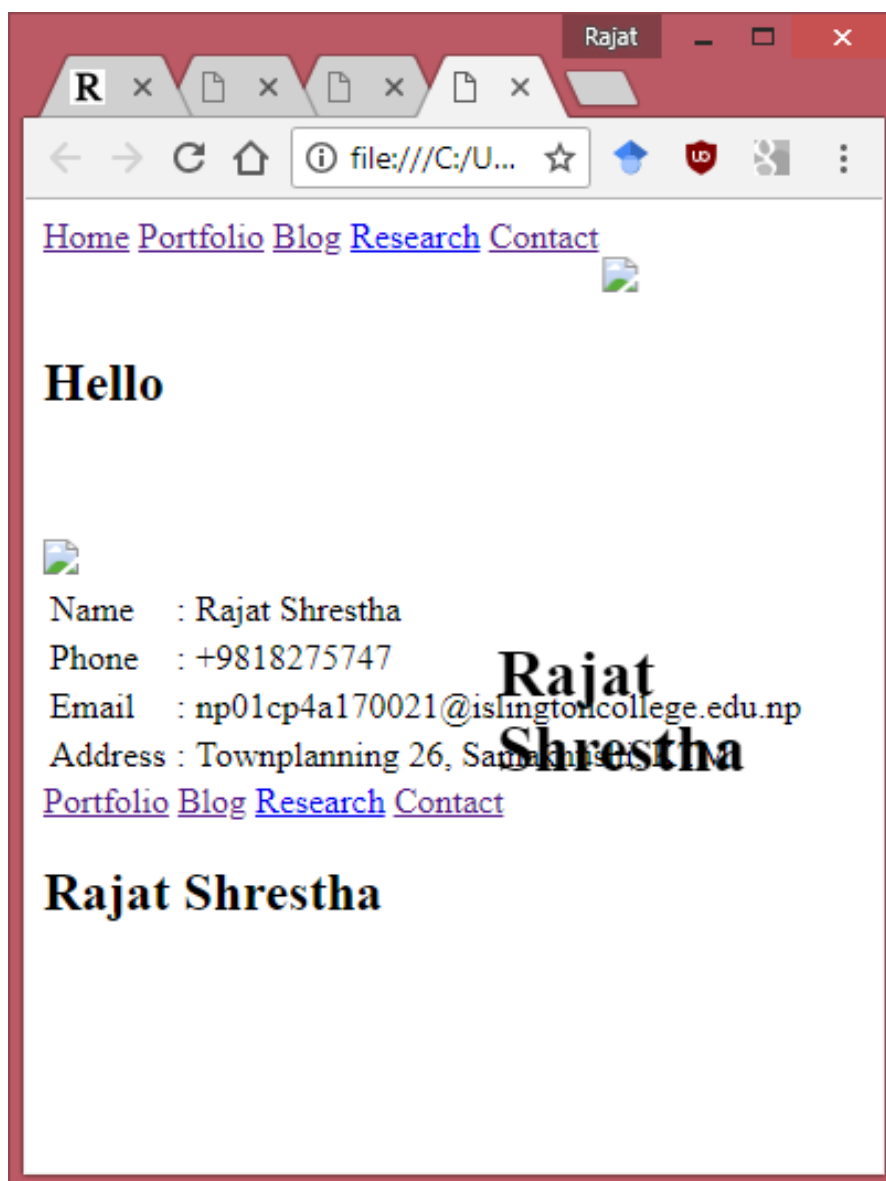


Figure 21: running home page with no other files

#### **4. Conclusion:**

For developing and designing any type of webpage, complex or simple, it is required to have proper html structure whose aesthetics are perfected by the help of CSS and added interactions using JavaScript. A simple wireframe model must be created so the structure of the website can easily be engineered. The wireframe makes procedure simpler. Forms was included which implemented JavaScript to gather the input from the main html page and shows appropriate messages.

The development of the webpage should be well documented as it can help people to understand the mechanisms of the project. The pages are made to be more simple and easy to understand but also contains all the required elements. This webpage contains all the required features addressed. The HTML is well structured, the CSS designs are applied creatively and the JavaScript is used for better interactions. To complete the project, various sites were inspected to gather ideas, the codes and files were organized and the end result was tested. Various test cases were put into consideration which resulted in successful testing of the page.

To develop the page proper tools should be used for better efficiency. Sublime text is a great text editor for editing simple texts and codes. Chrome is a simple light weight browser made by google which provides decent interface and tools to control and view the web page.

Hence, all the goals and objectives were met in this project which involved developing and designing a webpage. This webpage though being complete only runs on selected devices with similar specifications so it is not recommended to be officially used as it lacks various elements. This project can be extensively used by the students and others as an example or prototype of a website to build up their skills or to make the process easier.

## **References**

Ahmed, Z., 2014. Which one is better - JavaScript or jQuery. *International Journal of Computer Science and Mobile Computing*, 3(6), pp. 193-194.

Jamsa, K., 2013. *Introduction to Web Development Using HTML 5*. 1st ed. Burlington: Jones & Bartlett Publishers.

life wire, 2018. *The Difference Between Web Design and Web Development*. [Online]

Available at: <https://www.lifewire.com/web-design-vs-development-3468907>

[Accessed 17 5 2018].

McFarland, D. S., 2015. *CSS: The Missing Manual*. 4th ed. Boston: O'Reilly Media, Inc.

Mockplus, 2017. *Basic UI/UX Design Concept Difference Between Wireframe, Prototype, and Mockup*. [Online]

Available at: <https://www.mockplus.com/blog/post/basic-uiux-design-concept-difference-between-wireframe-prototype>

[Accessed 18 5 2018].

Study.com, 2018. *What is Web Technology? - Definition & Trends*. [Online]

Available at: <https://study.com/academy/lesson/what-is-web-technology-definition-trends.html>

[Accessed 18 5 2018].

Whittaker, J. . A. & Thomason, . M. G., 1994. A Markov Chain Model for Statistical Software Testing. *IEEE TRANSACTIONS ON SOFTWARE ENGINEERING*, 20(10), pp. 1,2.