Ryerson University
Faculty of Engineering & Architectural Science

Department of Mechanical and Industrial Engineering

Program: Mechanical Engineering

Course Number	CCPS 530
Section Number	01
Course Title	Web Systems Development
Semester/Year	Fall 2021

Instructor	Dr. Ghassem Tofighi

Report NO.	4

Report Title	HTML

Group No.	N/A
Submission Date	November 1, 2021
Due Date	November 4, 2021

Name	Student ID	Signature*
Fareed Syed	xxxx19438	

(Note: Remove the first 4 digits from your student ID)

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HTML Code of LAB3

LAB4_Fareed_Syed.html | back_end.js | main.css

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Fareed Syed Profile</title>
    <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
          integrity="sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T" crossorigin="anonymous">
    <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
    <link rel="stylesheet" href="main.css">

</head>
<body>
<nav class="navbar navbar-expand-sm navbar-0080FFFF bg-light">
    <a href="LAB3_Fareed_Syed.html" class="navbar-brand headings">Fareed Syed</a>
    <button class="navbar-toggler" data-toggle="collapse" data-target="#navbarMenu">
        <span class="navbar-toggle-icon"></span>
    </button>
    <div class="collapse navbar-collapse" id="#navbarMenu">
        <ul class="navbar-nav mr-auto">
            <li class="nav-item"><a href="#About" class="nav-link">About</a></li>
            <li class="nav-item"><a href="#Work" class="nav-link">Work Experience</a></li>
            <li class="nav-item"><a href="#Education" class="nav-link">Education</a></li>
            <li class="nav-item"><a href="#" class="nav-link">Volunteer Experience</a></li>
            <!--            <li class="nav-item"><a href="#" class="nav-link">Skills</a></li>-->
            <!--            <li class="nav-item"><a href="#" class="nav-link">Projects</a></li>-->
            <li class="nav-item"><a href="#Contact" class="nav-link">Contact</a></li>
        </ul>
    </div>
    <div>
        <div id="div1">
            <img id="test_img" alt=""
                 src="image_1.jpg">
        </div>
        <div id="div2">Ryerson University</div>
        <script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>
        <script type="text/javascript">
            let test = "1"
            setInterval(ajax_query, 20000);
            function ajax_query() {
                if (test <= "5") {
                    test++;
                } else {
                    test = "1";
                }

                $("#div2").load("description_" + test + ".txt", function (responseTxt, statusTxt, xhr) {
                });
                let $img = $("<img>", {'src': "image_" + test + ".jpg"});
                $('#div1').html($img);
            }
        </script>
    </div>


</nav>
```

LAB4_Fareed_Syed.html | back_end.js | main.css

```
<div class="container my-container">
    <div class="row gx-5">
        <div class="col-md-2">
            <img src="https://media-exp1.licdn.com/dms/image/C5603AQGPtdn7RExAOg/profile-displayphoto-shrink_800_800/0/15
                width="300"
                height="200" alt="Profile_Picture" class="circular--landscape">
        </div>
    </div>
    <div class="row my-row justify-content-left">Research Assistant at Ryerson University | Former Intern - Thales,
        Centre for Urban
        Energy | Mechatronics Engineering Student

    </div>
</div>
<br>
<div class="container my-container border rounded">
    <div class="row my-row gx-5">
        <h2 class="headings" id="About"><b>About</b></h2>
        <p>Thanks for stopping by!<br>
            Problem-solving has always been a passion of mine. If it weren't for engineering, not sure what I'd be
            doing.
            <br>
            <br>
            I am a tech-enthusiast and a fourth-year student majoring in Mechatronics Engineering and minoring in
            Computer
            Science at Ryerson University in Toronto. Areas like Automation controls, Robotics, Power and Energy
            interest
            me,
            but I'm always looking for opportunities to diversify my professional experience and expand my horizons.
            I want to continue to use my experience working in a team-oriented environment and managing time-sensitive
            projects
            to both grow myself professionally and contribute to the success of others. <br>
        </p>
    </div>
</div>
<br>
<div class="container my-container border rounded">
    <div class="row my-row">
        <h2 class="headings" id="Work"><b>Work Experience</b></h2>
    </div>
    <div class="row">
        <div class="col-md-2 justify-content-center"><a href="https://www.thalesgroup.com/en"><img
                src="https://media-exp1.licdn.com/dms/image/C4D0BAQEmnUAXTuLkJQ/company-logo_200_200/0/1530178704654?e=21
                width="100" height="100" alt="thales"></a></div>
        <div class="col-md-10 justify-content-center">

            <div class="row">
                <div class="col-sm"><b>Systems Operations Intern</b></div>
                <div class="col-sm dates"><b>Jan 2020-Dec 2020 </b></div>
            </div>
            <div class="row">
                <div class="col">Thales Canada, Transportation Solutions</div>
            </div>
            <div class="row">
                <div class="col">
                    <ul>
                        <li>Worked with Systems Designers and Systems Engineers to analyze train characteristics and
                            safety requirements of 4LM (4 Line Modernization) projects for London Underground Limited.
                        </li>
                        <li>Performed system analysis, modeling, and simulation to achieve 100% performance of train
                            control
                            systems running on CBTC technological signal requirements using OPSIM (Operational
                            Simulation)
                            software.
                        </li>
                        <li>Designed and implemented over 100 Safety Requirements checks on data of 14 VCCs provided by
                            Systems
                            Designers using Python graph traversals and released 8-10 check results on repositories like
                            Bitbucket and Jira every month.
                        </li>
                        <li>Introduced automated Excel Macros in Test case reports for testing and comparing base cases
                            with
                            test
                            cases which resulted in increase of 200% of productivity in validating check results testing
                            process.
                        </li>
                    </ul>
                </div>
            </div>
```

LAB4_Fareed_Syed.html | back_end.js | main.css

```
                    </div>
                </div>
            </div>
        </div>
        <div class="row">
            <div class="col-md-2 justify-content-center"><a href="https://www.ryerson.ca/cue/"><img
                    src="https://media-exp1.licdn.com/dms/image/C510BAQHwYxFoe__KAw/company-logo_200_200/0/1519872288839?e=21
                    width="100" height="100" alt="CUE"></a></div>
            <div class="col-md-10 justify-content-center">

                <div class="row">
                    <div class="col"><b>Projects Management Assistant</b></div>
                    <div class="col dates"><b>May 2019-Dec 2019 </b></div>
                </div>
                <div class="row">
                    <div class="col"> Centre for Urban Energy, Ryerson University</div>
                </div>
                <div class="row">
                    <div class="col">
                        <ul>
                            <li>Assisted in renewable energy research projects management by gathering data on city GHG
                                emissions and drafting monthly progress reports.
                            </li>
                            <li>Performed document control through tracking and distributing project documentation,
                                including
                                database updates, documentation of RoHS standard electrical equipment used in Smart Gird
                                Lab.
                            </li>
                            <li>Automated Macros to generate progress graph of all 28 research energy projects achieving
                                accuracy to 90%.
                            </li>
                            <li>Maintained liaisons with the research network community and the Center for Urban Energy.
                            </li>
                        </ul>
                    </div>
                </div>
            </div>
        </div>
    </div>
    <br>
    <div class="container my-container border rounded">
        <div class="row my-row">
            <h2 class="headings" id="Education"><b>Education</b></h2>
        </div>
        <div class="row">
            <div class="col-md-2"><a href="https://www.ryerson.ca/"><img
                    src="https://media-exp1.licdn.com/dms/image/C560BAQEN_oggJIiNwQ/company-logo_200_200/0/1625243952255?e=1
                    width="100" height="100" alt="Rye logo"></a></div>
            <div class="col-md-10">
                <div class="row">
                    <div class="col"><b>Ryerson University</b></div>
                    <div class="col dates"><b>Sep 2017-Apr 2022 </b></div>
                </div>
                <div class="row">
                    <div class="col">Major: Bachelor of Engineering - BE, Mechatronics Engineering</div>
                </div>
                <div class="row">
                    <div class="col"> Minor: Computer Science</div>
                </div>

            </div>
        </div>
    </div>
    <br>
    <footer>
        <div class="container my-container border rounded">
            <div class="row my-row">
                <h2 class="headings" id="Contact"><b>Contact</b></h2>
            </div>
            <div class="row">
                <div class="col-12">
                    <div class="gk-social">
                        <a href="mailto:khaja.syed@ryerson.ca" target="_top"><i class="fa fa-envelope"
                                                                                aria-hidden="true"></i></a>
                        <a href="https://www.linkedin.com/in/fareed-syed/" class="fa fa-linkedin"></a>
                        <a href="https://www.instagram.com/fareed.syed.31/" class="fa fa-instagram"></a>
                    </div>
                </div>
            </div>
```

html › body › div.container.my-container.border.rounded

GitHub Link to HTML page

https://fareedsyed31.github.io/LAB4/LAB4_Fareed_Syed.html
https://github.com/FareedSyed31/FareedSyed31.github.io/tree/main/LAB4

HTML Tags and Usage

The following HTML tags were used in writing the HTML code for LAB1.

1. **<!DOCTYPE>:** This was used to let the browser know what version of HTML doc is written.
2. **<html>:** This tag was used to set a container for other elements to be used in HTML documents.
3. **<head>:** This tag was used to define the head portion of the document containing info of HTML doc.
4. **<meta>:** This tag was used to set the info about the website for search engines.
5. **<body>:** This tag was used to define the main content of the HTML doc to display on the web browser.
6. <**style>:**This tag was used to set the font size and color of text on the HTML web page.
7. ** :** This tag was used to make divisions of content in the web page like (text, image, etc)
8. **<h1> :** This tag was used to set the name of the developer on the web page as Heading 1.
9. **<h2> :** This tag was used to set the profile and work experience on the web page as Heading 2.
10. **<img>:** This tag was used to set the image on the web page and edit the size of the image used.
11. **<p>:** This tag was used to create a paragraph of text in the body of the HTML code.
12. **<a>:** This tag was used to define the hyperlinks used to link from one page to another page.
13. **<b>:** This tag was used to bold the text within the tag range.
14. **
:** This tag was used to break the text to a new line within the paragraph of text.
15. **<ul>:** This tag was used to create an unordered list within the <h2> tag used for work experience.
16. **<li>:** This tag used to to create lists within the unordered list to specify details of work experience.
17. **<script>:** This tag was used to embed a client-side script (JavaScript).

JQuery vs JavaScript using AJAX and Navigating through DOM

Sometimes we hear such familiar terms like JavaScript, JQuery, Ajax. They seem to be similar in some ways. Nevertheless, there are some fundamental differences between these three terminologies. A web developer at some point of time, always asks this question to himself, what should I code in: jQuery or JavaScript? A few beginner web developers want to know the exact difference between the two. JQuery and JavaScript are actually the same. JQuery is a group of JavaScript libraries designed for DOM operations in HTML pages such as animation, event handling, traversing and Ajax interactions.

A strong hold on JavaScript is necessary to use either of the two scripting languages. Therefore, in case you have just started out, please get a basic understanding of JavaScript. JavaScript is a scripting language used to make web pages more dynamic and have increased user interactions. JQuery is a fast, small, and feature-rich JavaScript library. It handles all cross-browser issues itself. jQuery is also called a framework of JavaScript. Doing HTML DOM (document object model) traversal, manipulation, animation, event handling, and Ajax has become so simple using jQuery. Also, it makes the same code work uniformly also across all web browsers. Write less do more is the motto of jQuery. JQuery is very simple to grasp and even easier to use, therefore its learning curve is very small. There are a couple of other JavaScript based libraries for example, MooTools, but jQuery is the most popular because it is so easy to use and extremely powerful.

Web Browsers Used

The web browsers used during this Lab were Google Chrome and IntelliJ IDEA built in preview web browsers. When a web page is loaded, the browser first reads the HTML text and constructs a DOM Tree from it. Then it processes the CSS whether that is inline, embedded, or external CSS and constructs the CSSOM Tree from it. After these trees are constructed, then it constructs the Render-Tree from it. Different browsers use different rendering engines: Internet Explorer uses Trident, Firefox uses Gecko, Safari uses WebKit. Chrome and Opera (from version 15) use Blink, a fork of WebKit.

Conclusion

Total time spent on this LAB was around 4-5 hours. 2 hours were dedicated to readings, researching and learning using the Module4, Module5, Stack Overflow and blog posts. An hour was spent in writing the code. Majority of the text information and images used were taken from developers personal LinkedIn. Another 30 minutes was spent on debugging the code to make sure the HTML web page validated for HTML5 and CSS3 compliance. Approximately 45 Minutes were spent on writing the report for this LAB. Over all the Lab was a successful and fun learning experience.

References

Ashish, “JavaScript or jQuery: which one should I use?,” *Medium Ashish*, 29-Oct-2015. [Online]. Available: https://medium.com/@ashish_fagna/javascript-or-jquery-which-one-should-i-use-c4574fb00281. [Accessed: 30-Oct-2021].