Web Application Programming and Hacking

Instructor Name: Dr. Phu Phung

Student

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Short-bio: Balakrishna has interest in web developmemt and data analytics.

Figure 1: Balakrishna Jurollu

Repository Information

Repository's URL:https://github.com/jurollba-UC/jurollba-UC.github.io

It is a private repository of Balakrishna to upload his work of web application programming

INDIVIDUAL PROJECT-1

The Individual Project overview

According to the given instructions, I have created and deployed a personal portfolio on GitHub, which resembles like a professional profile. In which, I have included my Resume, name, headshot and contact information. The portfolio also includes my projects, skills and some other related content in it. For which I have used CSS template from Bootstrap, in which I have ensured that my portfolio is looking visually appealing and responsive layout. And in order to track the visitors I have incorporated a page tracker into the website(portfolio). And on the technical front, I have implemented some basic JavaScript functionalities such as jQuery and one more functionality of my own choice which indicates the LB to KGS. Moreover, cookies have been implemented in order to ensure the interactions.

General Requirements

In these general requirements, I have first created the personal website on GitHub as a professional profile, which includes my name, headshot, contact information and a resume, such as education, experiences and skills. Along with that, I provided a link which navigates to another HTML page saying "Web Application Programming and Hacking".

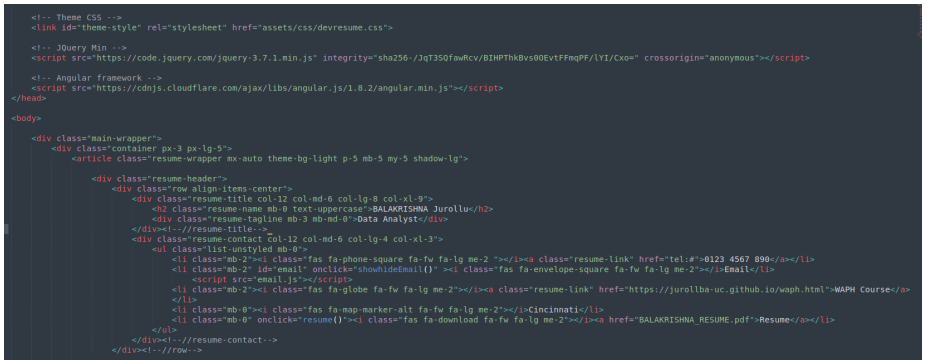
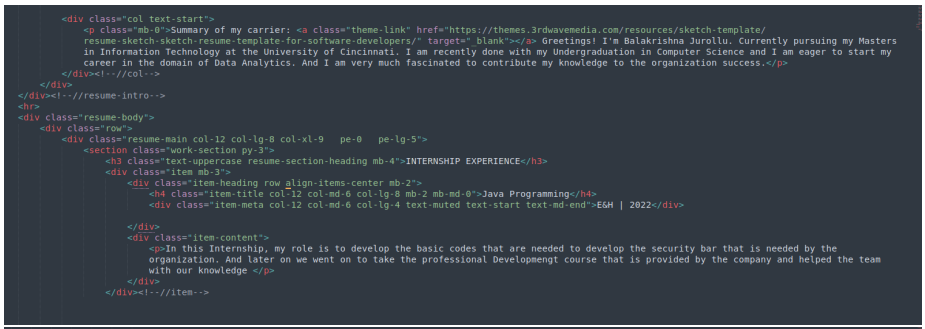
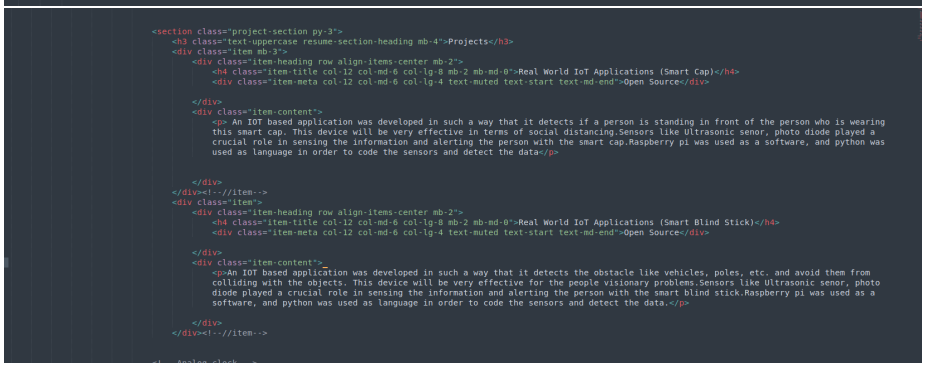
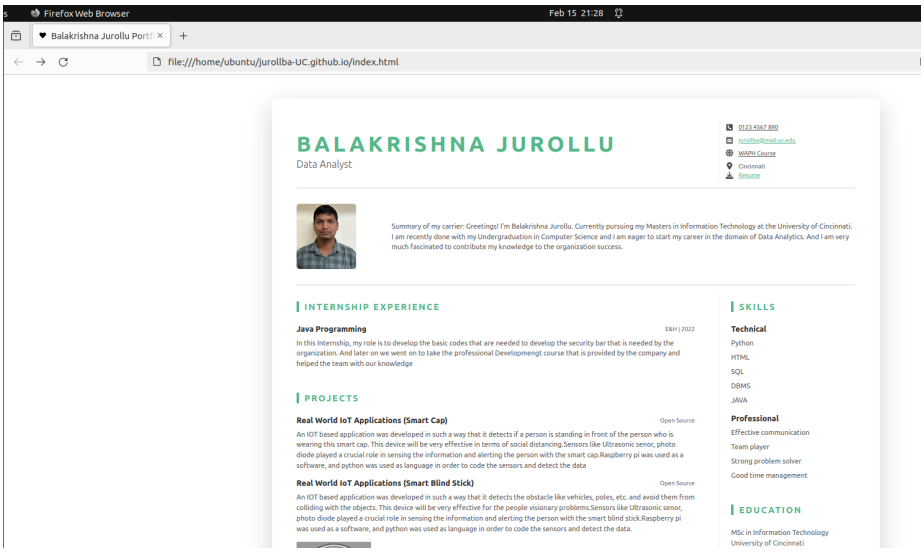


Figure 2: Simple JavaScript



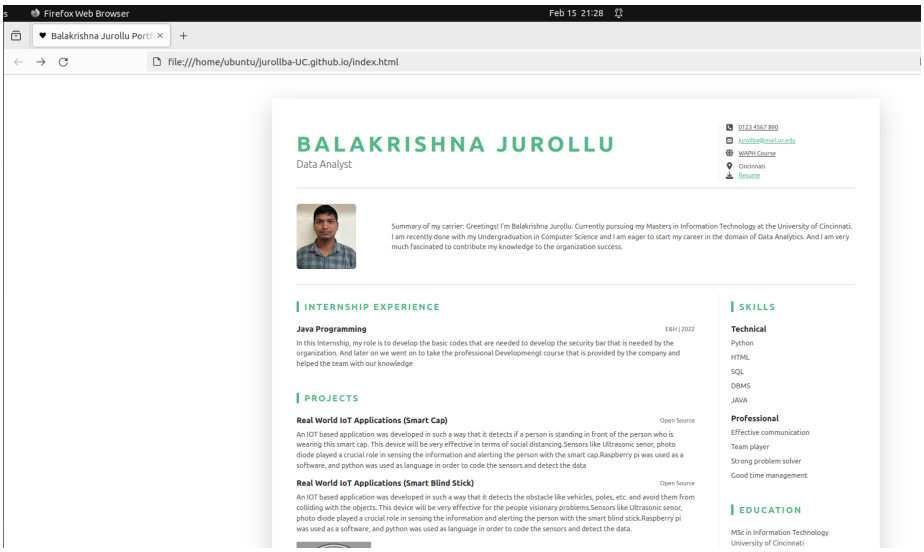




Non-Technical Requirements:

And when it comes to the non-technical requirements, I used CSS template from bootstrap. Which gave me an upper hand to provide my information in an organized manner. Such that it can target my potential employees. And I included as page tracker so that I can see the number of visits to my profile and it is also used as project in my Resume.

```
    <!-- Theme CSS -->
    <link id="theme-style" rel="stylesheet" href="assets/css/devresume.css">

    <!-- JQuery Min -->
    <script src="https://code.jquery.com/jquery-3.7.1.min.js" integrity="sha256-/JqT3SQfawRcv/BIHPThkBvs0OEvtFFmqPF/lYI/Cxo=" crossorigin="anonymous"></script>

    <!-- Angular framework -->
    <script src="https://cdnjs.cloudflare.com/ajax/libs/angular.js/1.8.2/angular.min.js"></script>
</head>

<body>

    <div class="main-wrapper">
        <div class="container px-3 px-lg-5">
            <article class="resume-wrapper mx-auto theme-bg-light p-5 mb-5 my-5 shadow-lg">

                <div class="resume-header">
                    <div class="row align-items-center">
                        <div class="resume-title col-12 col-md-6 col-lg-8 col-xl-9">
                            <h2 class="resume-name mb-0 text-uppercase">BALAKRISHNA Jurollu</h2>
                            <div class="resume-tagline mb-3 mb-md-0">Data Analyst</div>
                        </div><!--//resume-title-->
                        <div class="resume-contact col-12 col-md-6 col-lg-4 col-xl-3">
                            <ul class="list-unstyled mb-0">
                                <li class="mb-2"><i class="fas fa-phone-square fa-fw fa-lg me-2 "></i><a class="resume-link" href="tel:#">0123 4567 890</a></li>
                                <li class="mb-2" id="email" onclick="showhideEmail()" ><i class="fas fa-envelope-square fa-fw fa-lg me-2"></i>Email</li>
                                    <script src="email.js"></script>
                                <li class="mb-2"><i class="fas fa-globe fa-fw fa-lg me-2"></i><a class="resume-link" href="https://jurollba-uc.github.io/waph.html">WAPH Course</a>
                                </li>
                                <li class="mb-0"><i class="fas fa-map-marker-alt fa-fw fa-lg me-2"></i>Cincinnati</li>
                                <li class="mb-0" onclick="resume()"><i class="fas fa-download fa-fw fa-lg me-2"></i><a href="BALAKRISHNA_RESUME.pdf">Resume</a></li>
                            </ul>
                        </div><!--//resume-contact-->
                    </div><!--//row-->
```



Technical Requirements: In this section, I have used the previous Lab2 codes, which are used for showing the digital clock, analog clock and email that are displayed on top and bottom of the portfolio. And later I went to implement the functionality that converts LB's to KG's. Later on, I have implemented the two web API Integrations such as incorporating the "JOKE API" that displays a message in a text format for every one minute. And another API with Graphics that shows the super cars for every new arrival on to the web page. Finally, I have implemented the cookies that remember the client first visit and displays a massage showing his last time of visit. And asks for the username on every attempt.

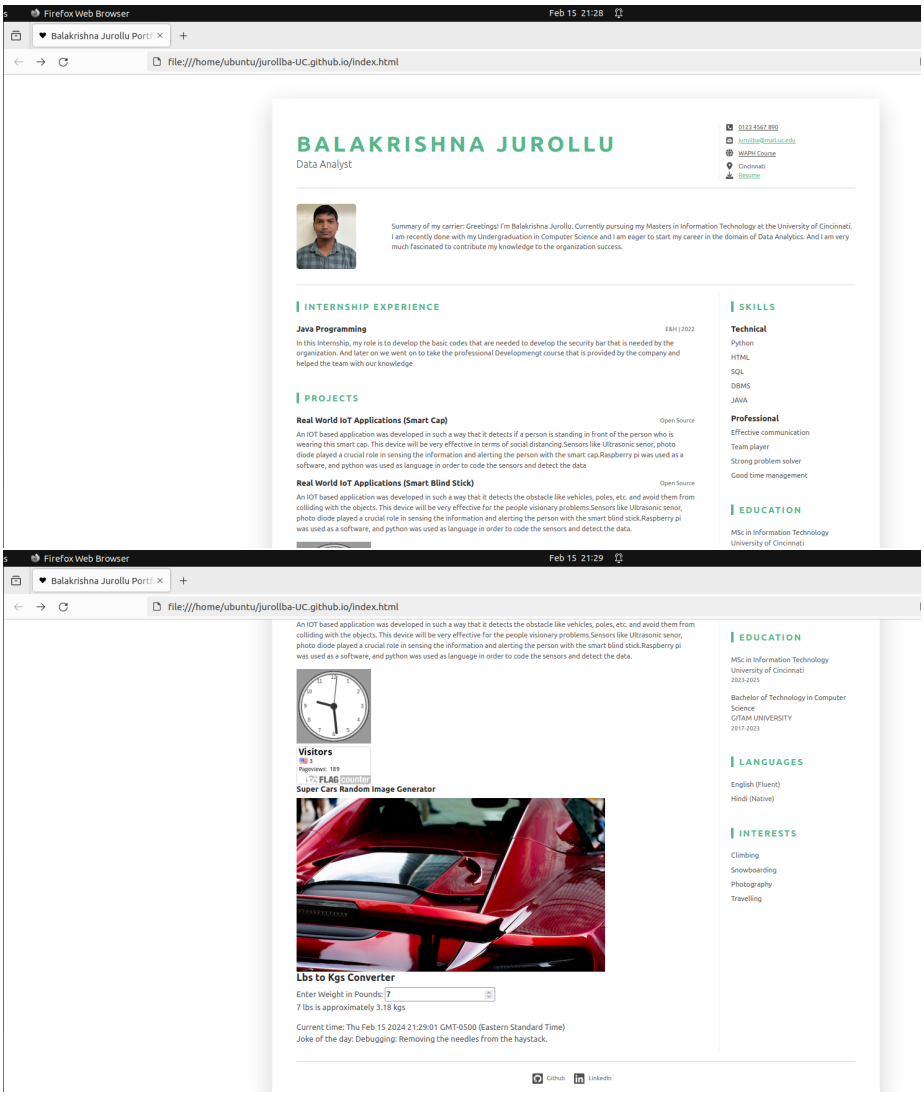
```
<!-- Analog clock -->
    <div class="analog-clock">


        <canvas id="analog-clock" width="150" height="150" style="background-color:#999"></canvas>
            <script src="https://waph-uc.github.io/clock.js"></script>
            <script>
                var canvas = document.getElementById("analog-clock");
                var ctx = canvas.getContext('2d');
                var radius = canvas.height/2;
                ctx.translate(radius, radius);
                radius = radius*0.90
                setInterval(drawClock, 1000);

                function drawClock(){
                    drawFace(ctx, radius);
                    drawNumbers(ctx,radius);
                    drawTime(ctx, radius);
                }
            </script>
```

```
</script>
<!-- flag counter -->
<div><a href="https://info.flagcounter.com/Amxn"><img src="https://s11.flagcounter.com/count/Amxn/bg_FFFFFF/txt_000000/border_CCCCCC/
columns_2/maxflags_10/viewers_0/labels_0/pageviews_1/flags_0/percent_0/" alt="Flag Counter" border="0"></a></div>
<!-- Cookies Storing the username  -->
<script>
    function retrieveOrAssignUserName() {
        const storedUserName = document.cookie.replace(/(?:(?:^|.*;\s*)username\s*\=\s*([^;]*).*$)|^.*$/, "$1");

        if (!storedUserName) {
            // If username is not found in the cookie, prompt the user to enter it
            const proposedUserName = prompt("Welcome! Please enter your username:", "YOURusername");
            if (proposedUserName !== null && proposedUserName !== "") {
              document.cookie = "username=" + proposedUserName + "; max-age=" + (365 * 24 * 60 * 60); // Store cookie for 1 year
               return proposedUserName;
        }
        } else {
            return storedUserName;
        }
                                            }


    function presentWelcomeGreeting() {
        const currentUser = retrieveOrAssignUserName();
        const currentDateTime = new Date();
        const previousVisit = document.cookie.replace(/(?:(?:^|.*;\s*)lastVisit\s*\=\s*([^;]*).*$)|^.*$/, "$1");

        if (currentUser) {
            if (previousVisit) {
                // If username and last visit time are found in the cookie, display welcome back message with last visit date/time
                const previousVisitDate = new Date(previousVisit);
                alert("Welcome back, " + currentUser + "! Your last visit was " + previousVisitDate.toLocaleString('en-US', { timeZone: '
                  America/New_York' }));
            } else {
                // If only username is found in the cookie, update the last visit time
                document.cookie = "lastVisit=" + currentDateTime.toUTCString() + "; max-age=" + (365 * 24 * 60 * 60); // Store cookie for
                1 year
                alert("Welcome, " + currentUser + "!");
            }
        }
```

```
<!-- random supercars image generator -->
<div >
    <h6>Super Cars Random Image Generator</h6>
    <img id="supercarImage" src="" alt="Supercar Image">
</div>
<script>
    // Fetch random supercar image from Pexels API
    fetch('https://api.pexels.com/v1/search?query=supercar&per_page=50', {
        headers: {
            Authorization: 'kYEiycRH3XvbjeZGRDHzQak2JtCdZQHvZw9iTlIJuc0gX9zbVFi5LS2X'
        }
    })
        .then(response => response.json())
        .then(data => {
            const randomNumber = Math.floor(Math.random() * data.photos.length);
            const supercarImage = document.getElementById('supercarImage');
            supercarImage.src = data.photos[randomNumber].src.medium;
            supercarImage.alt = data.photos[randomNumber].alt_description || 'Supercar Image';
        })
        .catch(error => console.error('Error fetching supercar image:', error));
</script>
```

```
<!-- new functionality-lbs to kg conversion using angular framework -->
<div ng-app="lbsToKgsApp" ng-controller="LbsToKgsController">
  <h5>Lbs to Kgs Converter</h5>
  <div>
    <label for="lbsInput">Enter Weight in Pounds:</label>
    <input id="lbsInput" type="number" ng-model="lbs" ng-change="convertToKgs()">
  </div>
  <div ng-show="lbs !== null">
    <p>{{lbs}} lbs is approximately {{kgs.toFixed(2)}} kgs</p>
  </div>
</div>
<script>
    angular.module('lbsToKgsApp', [])
        .controller('LbsToKgsController', function($scope) {
            $scope.lbs = null;
            $scope.kgs = 0;

            $scope.convertToKgs = function() {
              if ($scope.lbs !== null) {
                // 1 lb = 0.453592 kgs
                $scope.kgs = $scope.lbs * 0.453592;
              } else {
                $scope.kgs = 0;
              }
            };
          });
</script>
```

```
    <!-- digital clock -->
<div  id="digital-clock"></div>
<script>


    function fetchAndDisplayJoke(){
        $.get("https://v2.jokeapi.dev/joke/Any?type=single",function(result){
        $("#response").html("Joke of the day: " + result.joke);});
    }
    function displayTime(){
    document.getElementById('digital-clock').innerHTML = "Current time: " + new Date();}
    setInterval(displayTime, 500);

</script>
<!-- Joke API -->
<div id="response" ></div>
<script>


    function fetchAndDisplayJoke(){
                                $.get("https://v2.jokeapi.dev/joke/Any?type=single",function(result){
                                $("#response").html("Joke of the day: " + result.joke);});
                            }
                            fetchAndDisplayJoke();
                            setInterval(fetchAndDisplayJoke, 60000);
</script>
```


Firefox Web Browser
Feb 15 21:28
Balakrishna Jurollu Portf
file:///home/ubuntu/jurollba-UC.github.io/index.html
BALAKRISHNA JUROLLU
Data Analyst
0123 4567 890
jurollba@mail.uc.edu
WAPH Course
Cincinnati
Resume
Summary of my carrier: Greetings! I'm Balakrishna Jurollu. Currently pursuing my Masters in Information Technology at the University of Cincinnati. I am recently done with my Undergraduation in Computer Science and I am eager to start my career in the domain of Data Analytics. And I am very much fascinated to contribute my knowledge to the organization success.
INTERNSHIP EXPERIENCE
Java Programming
E&H | 2022
In this Internship, my role is to develop the basic codes that are needed to develop the security bar that is needed by the organization. And later on we went on to take the professional Developmengt course that is provided by the company and helped the team with our knowledge
PROJECTS
Real World IoT Applications (Smart Cap)
Open Source
An IOT based application was developed in such a way that it detects if a person is standing in front of the person who is wearing this smart cap. This device will be very effective in terms of social distancing.Sensors like Ultrasonic senor, photo diode played a crucial role in sensing the information and alerting the person with the smart cap.Raspberry pi was used as a software, and python was used as language in order to code the sensors and detect the data
Real World IoT Applications (Smart Blind Stick)
Open Source
An IOT based application was developed in such a way that it detects the obstacle like vehicles, poles, etc. and avoid them from colliding with the objects. This device will be very effective for the people visionary problems.Sensors like Ultrasonic senor, photo diode played a crucial role in sensing the information and alerting the person with the smart blind stick.Raspberry pi was used as a software, and python was used as language in order to code the sensors and detect the data.
SKILLS
Technical
Python
HTML
SQL
DBMS
JAVA
Professional
Effective communication
Team player
Strong problem solver
Good time management
EDUCATION
MSc in Information Technology
University of Cincinnati
Firefox Web Browser
Feb 15 21:29
Balakrishna Jurollu Portf
file:///home/ubuntu/jurollba-UC.github.io/index.html
An IOT based application was developed in such a way that it detects the obstacle like vehicles, poles, etc. and avoid them from colliding with the objects. This device will be very effective for the people visionary problems.Sensors like Ultrasonic senor, photo diode played a crucial role in sensing the information and alerting the person with the smart blind stick.Raspberry pi was used as a software, and python was used as language in order to code the sensors and detect the data.
Visitors
Pageviews: 189
FLAG Counter
Super Cars Random Image Generator
Lbs to Kgs Converter
Enter Weight in Pounds: 7
7 lbs is approximately 3.18 kgs
Current time: Thu Feb 15 2024 21:29:01 GMT-0500 (Eastern Standard Time)
Joke of the day: Debugging: Removing the needles from the haystack.
Github
LinkedIn
EDUCATION
MSc in Information Technology
University of Cincinnati
2023-2025
Bachelor of Technology in Computer Science
GITAM UNIVERSITY
2017-2023
LANGUAGES
English (Fluent)
Hindi (Native)
INTERESTS
Climbing
Snowboarding
Photography
Travelling