Web Development Internship

Submitted to
RAJIV GANDHI PROUDYOGIKI VISHWAVIDYALAYA BHOPAL (M.P)

INTERNSHIP REPORT

Submitted by
ASHISH KUMAR CHOUDHARY [0103CS221098]

Submitted to
PROF. PRIYANKA ASTHANA
PROF. VIVEK KUMAR SHARMA

Department of CSE

Lakshmi Narain College of Technology, Bhopal (M.P.)

Session
Jan 2023-24

Internship Certificate

CERTIFICATE OF INTERNSHIP

This Certificate Is Proudly Presented To

Ashish Kumar Choudhary

For Successfully Completing An Internship On

Web Development

From **01/09/2023** To **30/09/2023** At TechnoHacks EduTech.
During This Internship, We Found Him/Her Consistent And
Hardworking. We Wish All The Best For Future Endeavors.

Sandip Gavit
Founder

ISO
9001:2015

02/10/2023
Date

LAKSHMI NARAIN COLLEGE OF TECHNOLOGY, BHOPAL

DEPARTMENT OF CSE

ACKNOWLEDGEMENT

Ashish Kumar Choudhary (0103CS221098) would like to convey my gratitude to the Head of the department, In the duration of July-Nov 23 Summer Internship Program and giving me the platform to interact with industry professionals.

I would also like to thank Sandip Gavit (Founder), TechnoHacks EduTech for giving me the opportunity to work on the industry.

I extend my warm gratitude and regards to everyone who helped me during my internship.

Signature

Ashish Kumar Choudhary [0103CS221098]

INDEX

CHAPTER 1

INTRODUCTION

My four-week internship at TechnoHack EduTech, under the mentorship of Mr. Sandip Gavit, the esteemed Founder, was a transformative experience in the realm of web development. Kicking off on the 1st of September 2023, this immersive journey aimed to provide me with practical insights and hands-on skills in the dynamic field of web development.

Throughout this internship, my focus was on three distinct projects, carefully curated to offer a well-rounded learning experience. The first project involved the development of a calculator app, offering a foundational understanding of web development principles. Subsequently, I delved into designing a registration form for a website or app, honing my skills in user interface design, input validation, and error handling. The final project revolved around the creation of a secure login page, emphasizing robust input validation and password hashing.

Under the guidance of Mr. Sandip Gavit and the TechnoHack EduTech team, I not only gained technical proficiency but also learned to navigate real-world challenges in web development. This report encapsulates my journey, shedding light on the projects undertaken, the skills acquired, and the overall impact of this internship on my professional growth.

Internships serve as invaluable bridges between academic knowledge and real-world application. In the dynamic landscape of web development, my internship at TechnoHack EduTech played a pivotal role in enhancing my skills and understanding. It provided a platform to apply theoretical concepts to practical scenarios, fostering a deeper comprehension of web technologies. The exposure to live projects not only bolstered my technical expertise but also instilled a problem-solving mindset. Additionally, working alongside seasoned professionals offered insights into industry best practices and emerging trends, contributing significantly to my adaptability and readiness for future challenges in the ever-evolving field of web development. Internships are, indeed, catalysts for professional growth, offering a holistic learning experience that transcends the confines of traditional education.

CHAPTER 2
ABOUT THE ORGANIZATION

TechnoHack EduTech, under the guidance of Mr. Sandip Gavit, stands as a prominent player in the realm of education technology, particularly in the domain of web development. Founded with a vision to empower aspiring developers, the organization has garnered recognition for its commitment to quality training and mentorship.

As a forward-thinking entity, TechnoHack EduTech focuses on providing practical, industry-relevant experiences to bridge the gap between academic learning and real-world application. With a mission to nurture talent and cultivate a skilled workforce, the organization has become a cornerstone for those seeking hands-on exposure in web development.

Under Mr. Sandip Gavit's leadership, TechnoHack EduTech has established itself as a hub for innovation and learning, fostering an environment where interns can thrive and grow. The internship program reflects the organization's dedication to shaping the next generation of web developers and contributing to the evolution of the tech industry.

The internship at TechnoHack EduTech has not only provided a platform for honing technical skills but has also been instrumental in fostering a collaborative and dynamic learning atmosphere. The organization's commitment to excellence is evident through its hands-on approach to web development. Interns are exposed to real-world projects and benefit from the mentorship of industry professionals. This immersive experience allows interns to navigate the intricacies of web development, from designing interactive interfaces to implementing robust functionalities. Moreover, the organization's emphasis on innovation and adaptability equips interns with a comprehensive skill set, preparing them to meet the evolving demands of the technology landscape. The internship at TechnoHack EduTech has proven to be a transformative journey, blending theoretical knowledge with practical application, and setting a solid foundation for a promising career in web development.

CHAPTER 3

ABOUT THE PROJECTS

3.1 Calculator

3.1.1 Objective

Develop a calculator app capable of performing basic mathematical operations.

3.1.2 Technologies Used

- HTML
- CSS
- JavaScript

3.1.3 Implementation

The calculator app was designed with a user-friendly interface, allowing users to perform essential mathematical operations. The integration of HTML provided the structure, while CSS was employed for styling, ensuring an aesthetically pleasing layout. The functionality of the calculator, including addition, subtraction, multiplication, and division, was implemented using JavaScript. The project showcased proficiency in front-end technologies and the ability to create interactive web applications.

3.2 Registration Form

3.2.1 Objective

Develop a registration form for a website or app with input validation and error messages.

3.2.2 Technologies Used

- HTML
- CSS
- JavaScript

3.2.3 Implementation

The registration form project aimed to create a seamless user registration experience with a focus on input validation and clear error messaging. HTML provided the form structure, CSS enhanced the visual appeal, and JavaScript was utilized for client-side

validation. The form included fields for full name, username, email, phone number, password, and password confirmation.

3.3 Login Page

3.3.1 Objective

Create a login page for a website or app with input validation and password hashing.

3.3.2 Technologies Used

- **HTML**
- **CSS**

3.3.3 Implementation

The login page project emphasized security through input validation and password hashing. HTML was utilized for structuring the login interface, while CSS enhanced the visual aspects. The login page included input fields for username and password, a remember-me option, and a link for password recovery.

CHAPTER 4
HARDWARE/SOFTWARE PLATEFORM ENVIRONMENT

4.1 Integrated Development Environment (IDE)

4.1.1 Visual Studio Code

- Visual Studio Code, a widely used source-code editor, served as the primary Integrated Development Environment (IDE) for the internship projects. It provides a robust set of features for web development, including syntax highlighting, debugging support, and an extensive ecosystem of extensions.

4.2 Hardware and Software Platform

4.2.1 Hardware

- The specific hardware details of the development environment were not provided. Typically, web development can be carried out on a wide range of hardware, from basic laptops to more powerful workstations.

4.2.2 Software

- **Operating System (OS):**
  - The choice of operating system for development was not explicitly mentioned. Visual Studio Code is a cross-platform editor, compatible with Windows, macOS, and Linux.

- **Web Browsers:**
  - The web applications were likely tested on various web browsers during development. Commonly used browsers include Google Chrome, Mozilla Firefox, Microsoft Edge, and Safari.

- **Version Control:**
  - The use of version control systems such as Git was not explicitly mentioned. However, version control is a standard practice in software development, and platforms like GitHub, GitLab, or Bitbucket are often used for collaboration and code management.

- **Programming Languages:**
  - HTML, CSS, and JavaScript were the core programming languages used for web development. These languages are fundamental for building interactive and visually appealing web applications.

4.3 Deployment

The deployment details, including the hosting platform and server configuration, were not provided. Deployment could involve platforms like Netlify, Vercel, GitHub Pages, or traditional web hosting services.

5.1 Calculator Page

5.1.1 Input of Calculator page

- **index.html**

```html
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <meta charset="UTF-8">
5       <meta name="viewport" content="width=device-width, initial-scale=1.0">
6       <link rel="stylesheet" href="style.css">
7       <title>Calculator</title>
8   </head>
9   <body>
10      <div class="calculator">
11          <input type="text" placeholder="0" id="inputBox">
12      <div>
13              <button class="operator">AC</button>
14              <button class="operator">DEL</button>
15              <button class="operator">%</button>
16              <button class="operator">/</button>
17      </div>
18      <div>
19              <button>7</button>
20              <button>8</button>
21              <button>9</button>
22              <button class="operator">*</button>
23      </div>
24      <div>
25              <button>6</button>
26              <button>5</button>
27              <button>4</button>
28              <button class="operator">-</button>
29      </div>
```

- **styles.html**

```css
*{
    margin:0;
    padding:0;
    box-sizing:borde-box;
    font-family: 'poppins',sans-serif;

}
body {

    height: 100vh;
    display: flex;
    justify-content: center;
    align-items: center;
    background-image: linear-gradient(45deg, #0a0a0a, #3a4452);
}

.calculator {
    border: 1px solid #717377;
    padding: 20px;
    border-radius: 16px;
    background: transparent;
    box-shadow: 0px 3px 15px rgba(113,115,119,0.5);
    text-align: center;
}

input{
    width:320px;
    border: none;
    padding: 24px;
```
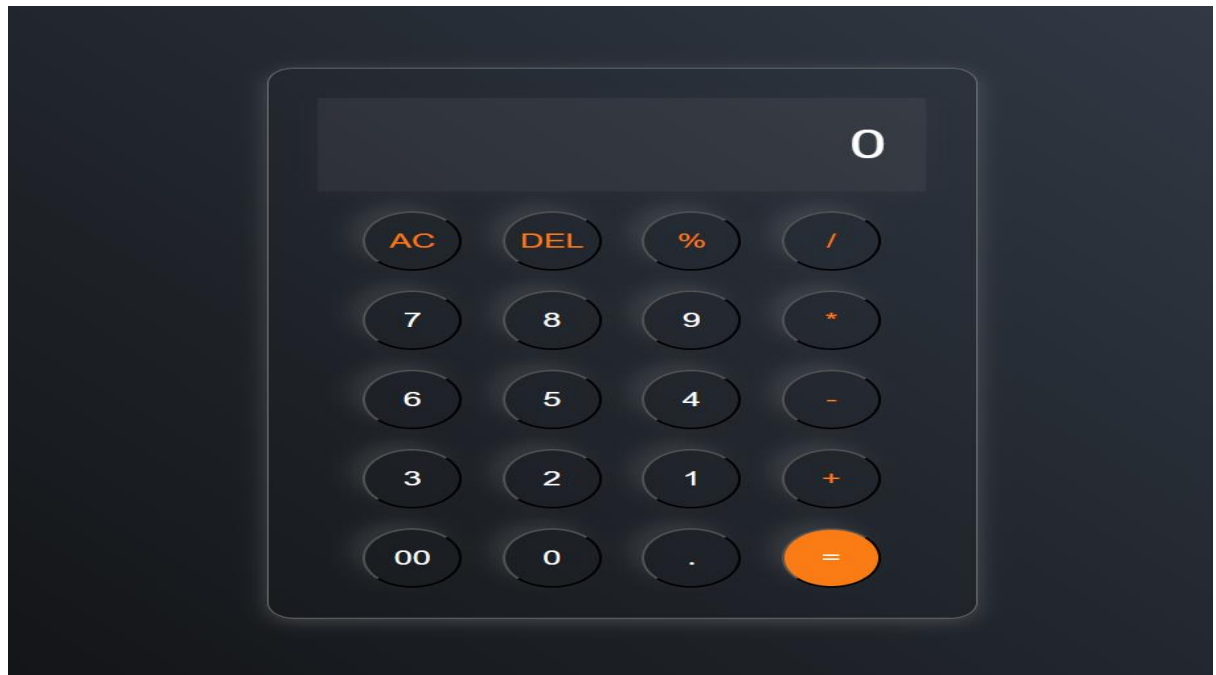
- **scripts.html**

```javascript
let input = document.getElementById( 'inputBox');
let buttons = document.querySelectorAll('button')
let string = "";
let arr = Array.from(buttons);
arr.forEach(button => {
    button.addEventListener('click',(e) =>{
        if(e.target.innerHTML == '='){
            string = eval(string);
            input.value=string;
        }
        else if(e.target.innerHTML == 'AC'){
            string = "";
            input.value = string;
        }
        else if(e.target.innerHTML == 'DEL'){
            string = string.substring(0,string.length-1);
            input.value = string;
        }
        else{
            string += e.target.innerHTML;
            input.value = string;
        }

    })
})
```

5.1.2 Output of Calculator page

5.1 Login Page

5.1.1 Input of Login page

- **index.html**

```
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <meta charset="UTF-8">
5       <meta name="viewport" content="width=device-width, initial-scale=1.0">
6       <link rel="stylesheet"  href="style.css">
7       <link href='https://unpkg.com/boxicons@2.1.4/css/boxicons.min.css' rel='stylesheet'>
8       <title>Login page</title>
9   </head>
10  <body>
11      <div class="wrapper">
12          <form action="">
13              <h1>
14                  Login
15              </h1>
16              <div class="input-box">
17                  <input type="text" placeholder ="username" required>
18                  <i class='bx bxs-user'></i>
19              </div>
20              <div class="input-box">
21                  <input type="password" placeholder ="password" required>
22                  <i class='bx bxs-lock-alt' ></i>
23              </div>
24              <div class="remember-forget">
25                  <label><input type="checkbox" required> Remember me</label>
26                  <a href="#">Forget password?</a>
27              </div>
28              <button type="submit" class="btn">Login</button>
29              <div class="register-link">
```
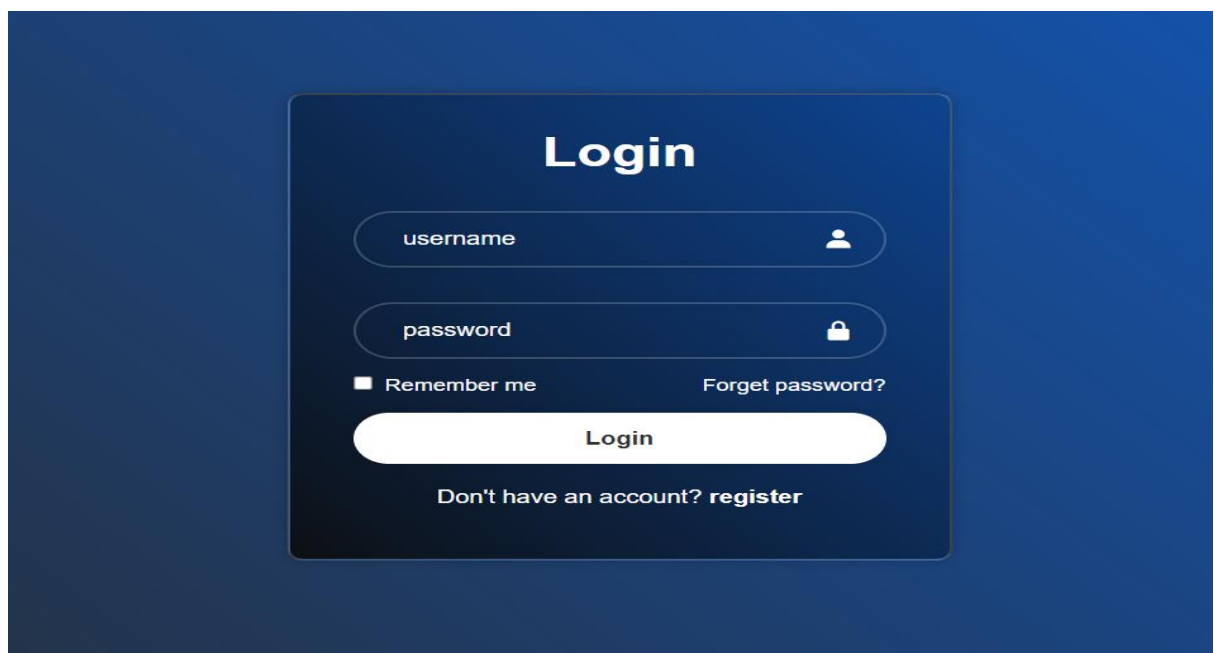
- **styles.html**

```css
1  *{
2      margin: 0;
3      padding: 0;
4      box-sizing: border-box;
5      font-family: "poppins",sans-serif;
6  }
7
8  body{
9      display: flex;
10     justify-content: center;
11     align-items: center;
12     min-height: 100vh;
13     background-image: linear-gradient(45deg, ■#0a0a0adf, ■#0e5dcc);
14 }
15
16 .wrapper{
17     width: 420px;
18     color: □#fff;
19     border-radius: 10px;
20     padding: 30px 40px;
21     background-image: linear-gradient(45deg, ■#0a0a0adf, ■#0e4490);
22     border: 2px solid □rgba(255, 255, 255, .2);
23     box-shadow: 0 0 10px □rgba(0,0,0,.2);
24 }
25
26 .wrapper h1{
27     font-size: 36px;
28     text-align: center;
29 }
```

5.1.2 Output of Login page

14

5.1 Registration page

5.1.1 Input of Registration page

- **index.html**

```
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4       <meta charset="UTF-8">
5       <meta name="viewport" content="width=device-width, initial-scale=1.0">
6       <link rel="stylesheet"  href="style.css">
7       <title>Registration Form</title>
8   </head>
9   <body>
10      <div class="container">
11          <div class="title">Registration</div>
12          <form action="#">
13              <div class="user-details">
14                  <div class="input-box">
15                      <span class="details">Full Name</span>
16                      <input type="text" placeholder="Enter your name" required>
17                  </div>
18                  <div class="input-box">
19                      <span class="details">Username</span>
20                      <input type="text" placeholder="Enter your Username" required>
21                  </div>
22                  <div class="input-box">
23                      <span class="details">Email</span>
24                      <input type="text" placeholder="Enter your email" required>
25                      <div class="error-box">
26                          <div class="error">Invalid email address!</div>
27                      </div>
28                  </div>
29                  <div class="input-box">
```

- **styles.html**

```
1   *{
2       margin: 0;
3       padding: 0;
4       box-sizing: border-box;
5       font-family: 'poppins',sans-serif;
6   }
7
8   body{
9       display: flex;
10      height: 100vh;
11      justify-content: center;
12      align-items: center;
13      background-image: linear-gradient(45deg,  ■#000000,  ■#25426d);
14  }
15
16  .container{
17      max-width: 700px;
18      width: 100%;
19      background:  □#fff;
20      padding: 25px 30px;
21      border-radius: 5px;
22      background-image: linear-gradient(45deg,  ■#8c9294,  ■#3a4452);
23      border:  □white;
24  }
25
26  .container .title{
27      font-size: 25px;
28      font-weight: 500;
29      position: relative;
```

- **scripts.html**

```
1   document.addEventListener('DOMContentLoaded', function () {
2       const emailInput = document.querySelector('input[type="text"][placeholder="Enter your email"]');
3       const phoneInput = document.querySelector('input[type="text"][placeholder="Enter your number"]');
4       const passwordInput = document.querySelector('input[type="password"][placeholder="Enter your password"]');
5       const confirmPasswordInput = document.querySelector('input[type="password"][placeholder="Confirm your password"]');
6
7       emailInput.addEventListener('blur', function () {
8           checkEmailError();
9       });
10
11      phoneInput.addEventListener('blur', function () {
12          checkPhoneError();
13      });
14
15      passwordInput.addEventListener('blur', function () {
16          checkPasswordError();
17      });
18
19      confirmPasswordInput.addEventListener('blur', function () {
20          checkConfirmPasswordError();
21      });
22
23      function checkEmailError() {
24          const emailError = document.querySelector('.input-box:nth-child(3) .error');
25          if (!isValidEmail(emailInput.value)) {
26              emailError.style.display = 'block';
27          } else {
28              emailError.style.display = 'none';
29          }
30      }
```

5.1.2 Output of Registration page

CHAPTER 5

FUTURE SCOPE

The web development internship at TechnoHack EduTech has laid a robust foundation, offering a pathway for future growth. With a solid grasp of HTML, CSS, and JavaScript, the next steps involve delving into advanced frameworks like React or Angular for more sophisticated frontend development. Exploring backend languages such as Node.js or Python (Django/Flask) opens avenues for dynamic web applications with enhanced functionalities. Security practices, including advanced authentication methods and data encryption, will be crucial to fortify web applications. Furthering skills in version control with Git, collaboration on platforms like GitLab, and mastery of browser developer tools contribute to efficient, team-oriented development practices.

Optimizing performance, delving into UX/UI design principles, and staying updated on the latest JavaScript features will enrich your capabilities. Integrating third-party APIs and continuous learning through online courses and community engagement are integral to staying relevant in the ever-evolving web development landscape.

Building a diverse portfolio with increasingly complex projects showcases your expertise. As you advance, consider exploring areas like responsive design, server-side databases, and asynchronous programming. This multifaceted approach ensures that you remain adaptable and well-prepared for the exciting challenges and opportunities in the future of web development.

CHAPTER 6

REFERENCES

https://www.w3schools.com/

https://www.youtube.com/

https://www.geeksforgeeks.org/