



# PROJECT REPORT

**AKSHAY MALIK**

PROJECT

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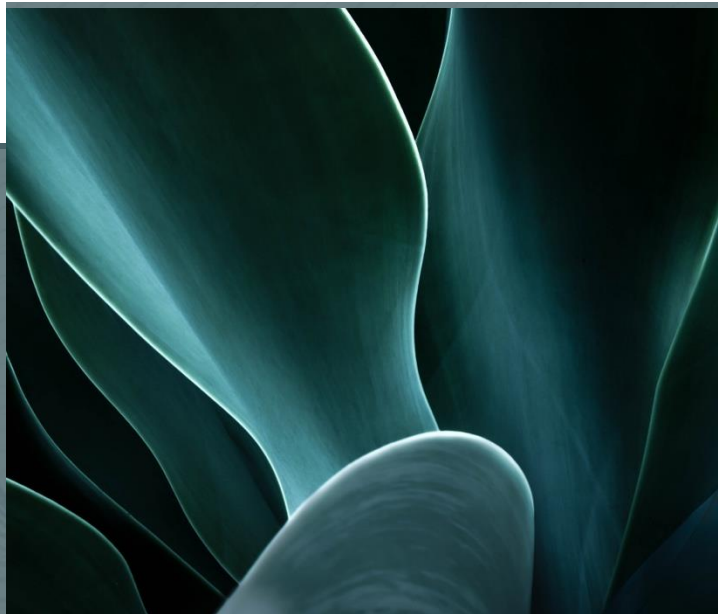
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## INTRODUCTION

This report provides an overview of my internship experience in full stack web development. As part of my learning journey, I completed two significant projects: a calculator application named "SimpleCalc" and a personal webpage. These projects allowed me to apply fundamental concepts in front-end and back-end development, gain familiarity with development tools, and improve my programming skills. This document highlights the technical stack used, functionalities of each project, challenges faced, and key takeaways.





## Overview of Full Stack Web Development

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### OVERVIEW

Full stack web development involves working on both front-end and back-end technologies to create a fully functional web application. A full stack developer is proficient in:

- **Front-End Development:** Developing the client-side elements that users interact with, such as interfaces and layouts.
- **Back-End Development:** Managing server-side processes, database interactions, and server logic.
- **Database Management:** Storing, retrieving, and managing data efficiently.
- **Deployment:** Deploying applications on web servers for public access.

During my internship, I worked with tools that cover these areas, including HTML, CSS, JavaScript, Node.js, and databases.

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### Tools and Technologies Used

#### Front-End Technologies:

- **HTML and CSS:** For webpage structure and styling.
- **JavaScript:** For interactivity and client-side logic.

#### Back-End Technologies:

- **Node.js:** For server-side programming.
- **Express:** For handling requests and routing.

#### Database Technologies:

- **MySQL and MongoDB:** For data storage and management.

#### Version Control and Deployment:

- **Git and GitHub:** For version control.
- **Deployment platforms:** Utilized online platforms to make projects accessible to users.



### 5.1 Project Overview

This project involved creating a personal webpage that serves as a digital portfolio. The page introduces me, provides a short bio, and includes links to my social media profiles.

### 5.2 Problem Solved

The personal webpage functions as a digital business card, enabling online networking by making my profile and contact options accessible to peers and potential employers.

### 5.3 Technologies Used

- **HTML/CSS:** Structural components and basic inline styling.
- **Hyperlinks:** Allows navigation to social media profiles.

### 5.4 Key Features

- **Bio Section:** Brief introduction and background information about myself.
- **Social Media Links:** Provides links to social media profiles that open in new tabs, enhancing user navigation.
- **Centered Layout:** Basic HTML and CSS styling to maintain a neat, centered layout.

### 5.5 Challenges and Solutions

- **Challenge:** Creating a professional, engaging design with basic HTML/CSS.
  - **Solution:** Used a simple centered layout with a rounded profile image for a visually appealing design.
- **Challenge:** Ensuring links open in new tabs for improved navigation.
  - **Solution:** Utilized target="\_blank" in anchor tags to avoid redirecting users away from the main page.

### 5.6 Key Learnings

- Strengthened skills in HTML and CSS, including handling hyperlinks and designing a straightforward layout.
- Understood the importance of UI design to create an engaging and accessible user experience.

## OUTPUT :

### Welcome to My Webpage



Hi! I'm Akshay Malik, a B.tech CSE 2nd year student. Welcome to my personal webpage where I share a bit about myself and my journey. Connect with me on social media below!

#### social media links:

[Facebook](#) || [Twitter](#) || [Instagram](#) || [LinkedIn](#)

## Project 2: Simple Calc (Calculator Application)

### 4.1 Project Overview

SimpleCalc is a basic calculator web application designed to perform arithmetic operations (addition, subtraction, multiplication, and division). The application is user-friendly and visually minimalistic, allowing for straightforward interaction.

### 4.2 Problem Solved

The SimpleCalc application provides an easy way to perform basic calculations within a browser, which can be beneficial in scenarios where users require quick calculations without switching to a separate calculator app.

### 4.3 Technologies Used

- **HTML/CSS:** Basic structure and styling.
- **JavaScript:** Handling calculator functionality, including managing input, performing calculations, and error handling.

### 4.4 Key Features

- **Interactive Buttons:** Numeric and operation buttons that users can click to create expressions.
- **Real-Time Display:** Shows current input and calculation results immediately.
- **Error Handling:** Displays error messages for invalid calculations, maintaining a seamless user experience.

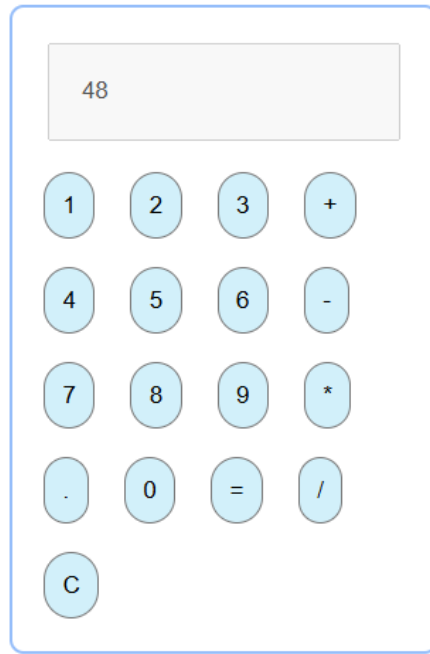
### 4.5 Challenges and Solutions

- **Challenge:** Error handling to ensure invalid expressions don't cause the application to crash.
  - **Solution:** Used JavaScript try...catch to handle errors gracefully.
- **Challenge:** Creating a responsive design with minimal use of libraries.
  - **Solution:** Leveraged CSS flexbox to create a flexible, centered layout with CSS hover effects for interactive feedback.

### 4.6 Key Learnings

- Enhanced understanding of JavaScript for managing DOM interactions and handling calculations.
- Learned foundational CSS techniques to create a simple but responsive design without additional libraries.

### Calculator033



**THANKS**