Established – 1961 Subject: WEB DESIGNING

SEVA SADAN'S

R. K. TALREJA COLLEGE

OF

ARTS, SCIENCE & COMMERCE

ULHASNAGAR – 421 003

CERTIFICATE

This is to certify that Mr. MAYANK SINGH RAJPUT of F.Y. Information Technology (FYIT) Roll No. 2541051 has satisfactorily completed the Web Designing Mini Project entitled Portfolio with jQuery Animation Based Skill Visualization during the academic year 2025 – 2026, as a part of the practical requirement. The project work is found to be satisfactory and is approved for submission.

PROF. INCHARGE **HEAD OF DEPT**

Sahil Shukla **Prof.Laxmi Jeshwani**

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1. INTRODUCTION

In the modern digital era, a personal portfolio website plays a crucial role in showcasing an individual's skills, projects, and professional background. It acts as a digital resume that allows recruiters, clients, and collaborators to understand a developer's capabilities in an interactive and engaging way.

This project focuses on the development of an interactive portfolio website using HTML, CSS, JavaScript, and jQuery. The key highlight of the project is an animated skill visualization system that dynamically loads data from a JSON file and displays it using animated progress bars.

The website is designed with multiple themes, smooth transitions, and structured sections such as Home, About, Projects, and Contact. The system demonstrates practical implementation of DOM manipulation, event handling, AJAX-based JSON loading, and responsive UI design.

The objective of this project is to combine frontend technologies with dynamic content rendering to create a modern and user-friendly portfolio platform.

2. REQUIREMENT SPECIFICATION

- **Software Requirements**

Web Browser (Chrome, Edge, Firefox)

VS Code (for development)

Live Server (for JSON loading)

- **Technologies Used**

HTML5 – Structure

CSS3 – Styling and Layout

JavaScript – Interactivity

JQuery – Animation and DOM manipulation

JSON – Skill data storage

- **Non-Functional Requirements**

The system should be responsive.

The UI should be visually appealing.

The system should load efficiently.

The code should be modular and maintainable.

3. SYSTEM DESIGN

The system follows a client-side architecture. All processing occurs in the browser.

The structure is divided into:

- **Presentation Layer (HTML & CSS)**
- **Behavior Layer (JavaScript & jQuery)**
- **Data Layer (skills.json)**

1. Navigation Module

Handles page switching using class manipulation.

2.Skill Visualization Module

Loads data using $.getJSON()

Dynamically generates skill bars

Animates width property using jQuery

3. Theme Management Module

Cycles between three themes

Uses CSS class switching on the body element

4. Typing Effect Module

Displays animated welcome text using JavaScript timing functions.

4. SYSTEM IMPLEMENTATION

4.1 HTML Implementation

The project was implemented using structured separation of concerns.

The HTML structure consists of:

- **Navigation bar**
- **Multiple section elements**
- **Skill container**
- **Project section**
- **Contact form**
- **Footer**

Semantic tags were used for better structure and readability.

4.2 CSS Implementation

CSS was used for:

Theme-based background gradients

Responsive grid layout

Skill progress bar design

Smooth animations using transitions

Page fade-in animation using keyframes.

Three themes were implemented using body class switching:

Theme 1 – Sky Blue

Theme 2 – Dark Professional

Theme 3 – Soft Sunset

4.3 JavaScript & jQuery Implementation

Navigation Logic

Used class manipulation to show and hide sections dynamically.

Skill Data Loading
Used AJAX method:
$.getJSON("skills.json")

This loads skills dynamically and prevents hardcoding.
Skill Animation

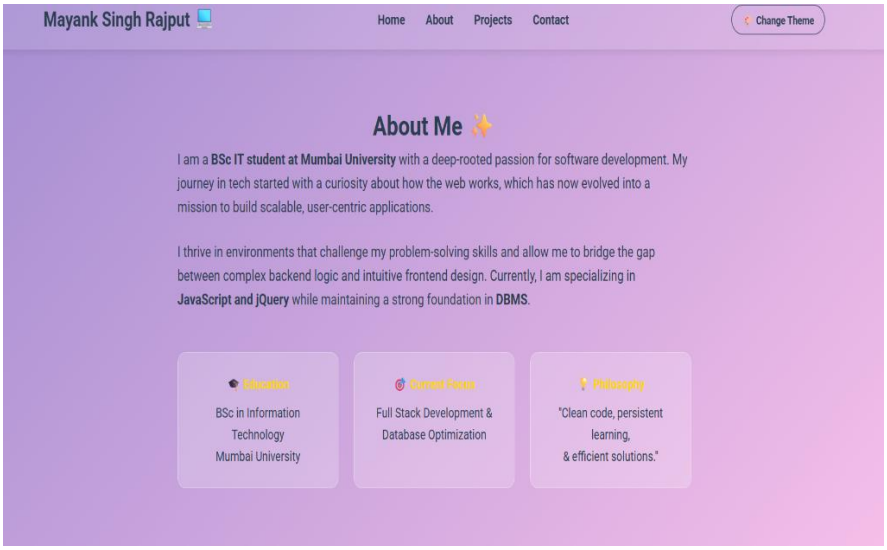
Each skill bar uses a data attribute to store percentage value. The width property is animated using CSS transition triggered via jQuery.

Theme Switching
Used modulo logic to cycle through three themes efficiently.

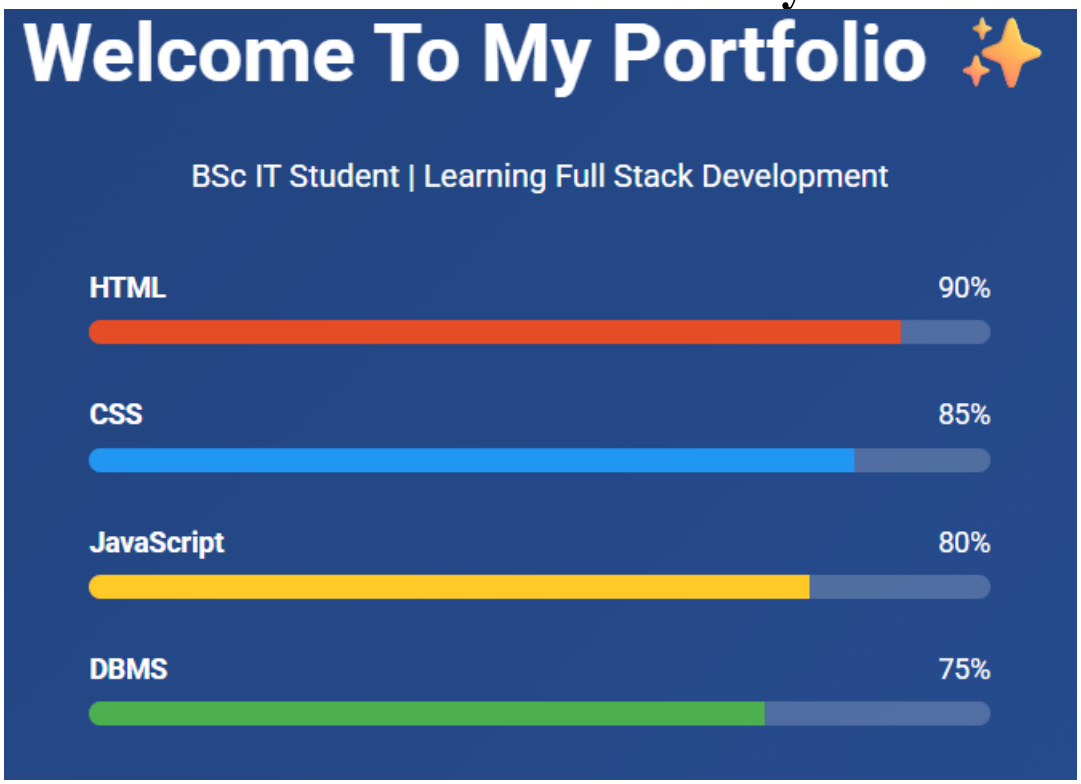
Typing Effect
Implemented using setTimeout() function to create character-by-character animation.

5. SYSTEM TESTING AND RESULTS

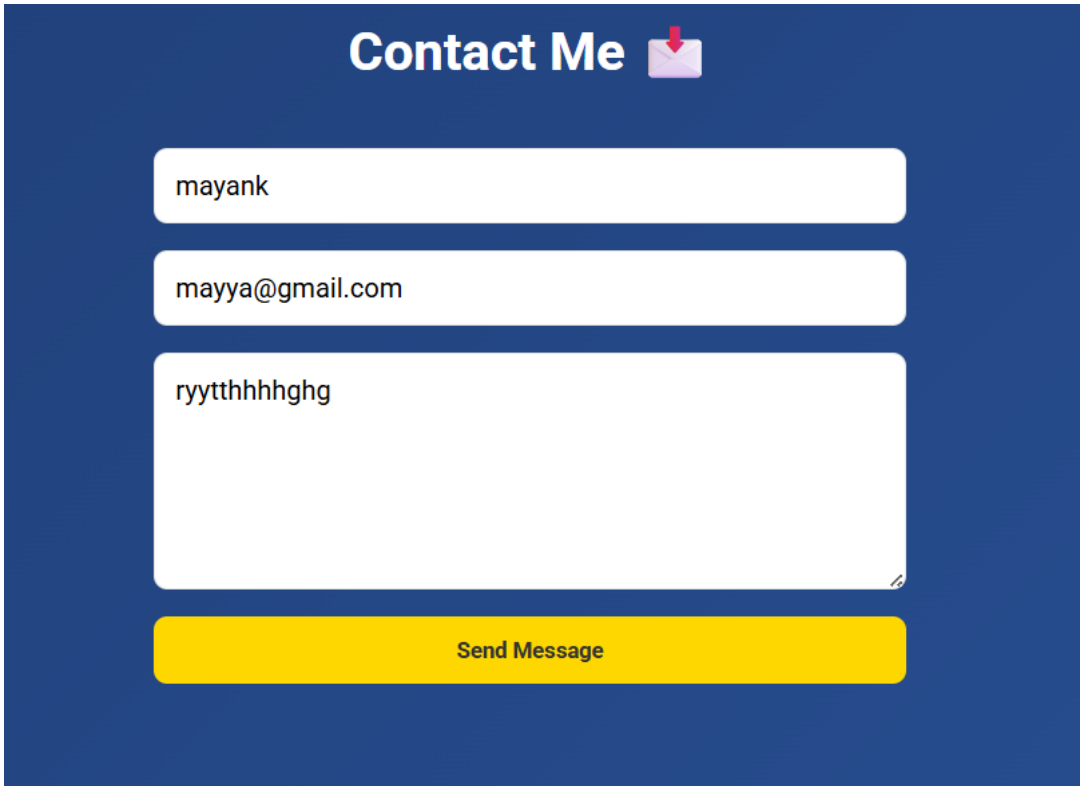
- **Correct navigation between sections**



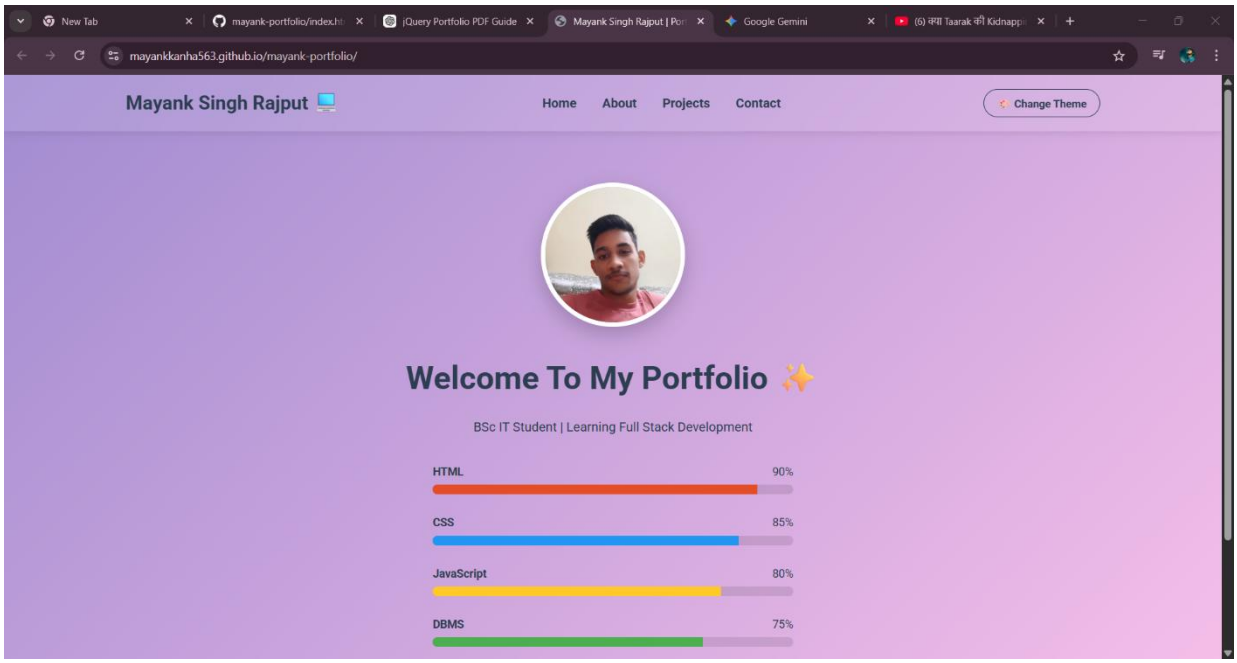
- **Skill bar animation accuracy**

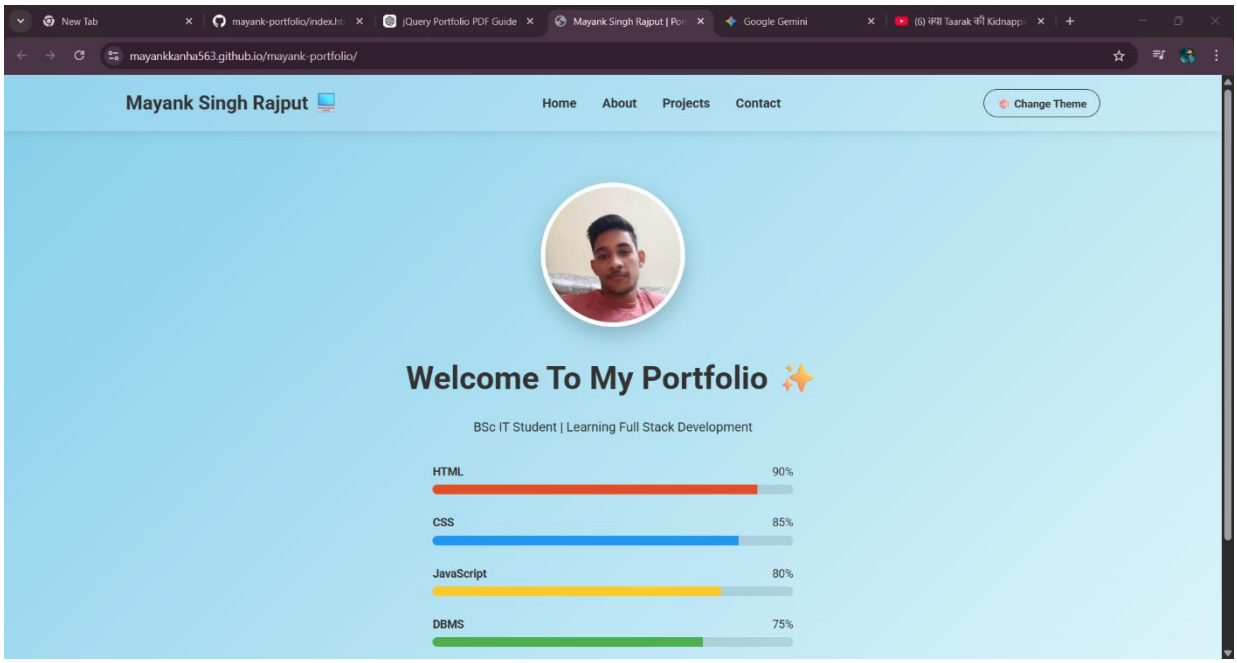


- **Contact section works properly**



- **Theme switching works without page reload**.





6. FUTURE SCOPE AND CONCLUSION

6.1 Future Scope

The project can be enhanced by:

- **Adding backend integration for contact form**
- **Storing theme preference using local Storage**
- **Adding login authentication**
- **Deploying on cloud platforms**
- **Adding project filtering and search functionality**
- **Converting into a full-stack application**

6.2 Conclusion

The Interactive Portfolio Website successfully demonstrates the integration of HTML, CSS, JavaScript, and jQuery to build a dynamic and user-friendly web application.

The project highlights practical implementation of DOM manipulation, AJAX-based JSON loading, animation handling, and theme management.
This project strengthens understanding of frontend development concepts and serves as a foundation for building more advanced full-stack applications

7. REFERENCES

1. https://www.w3schools.com
2. https://developer.mozilla.org
3. https://api.jquery.com
4. https://code.jquery.com
5. Google Fonts Documentation

8. GLOSSARY

HTML – Hyper Text Markup Language used for webpage structure.

CSS – Cascading Style Sheets used for styling web pages.

JavaScript – Programming language used for interactivity.

jQuery – JavaScript library for simplified DOM manipulation.

JSON – JavaScript Object Notation used for data storage.