DAYANANDA SAGAR UNIVERSITY

Devarakaggalahalli, Harohalli
Kanakapura Road,Bangalore South Dt,Ramanagara ,562112, Karnataka, India

Bachelor of Technology in

COMPUTER SCIENCE AND TECHNOLOGY

Full Stack Development (24CT2305)

Mini Project Report

DAYANANDA SAGAR UNIVERSITY CLONE WEBSITE

BY-

BY-

Name of the student- Disha Goyal

USN No: ENG24CT0035

Name of the student- Nandini Jadhav

USN No: ENG24CT0043

Name of the student- Janhavi Pagare

USN No: ENG24CT0050

Name of the student- Varsha N A

USN No: ENG24CT0062

Name of the student- Thanish

USN No: ENG24CT0021

Under the supervision of Dr.Santosh Kumar Associate Professor.

DEPARTMENT OF COMPUTER SCIENCE & TECHNOLOGY,

SCHOOL OF ENGINEERING DAYANANDA

SAGAR UNIVERSITY, (2025-2026)

DAYANANDA SAGAR UNIVERSITY

Department of Computer Science & Engineering
Devarakaggalahalli, Harohalli
Kanakapura Road, Ramanagara - 562112, Karnataka, India

CERTIFICATE

This is to certify that the Full Stack Development Mini Project work titled **"DAYANANDA SAGAR UNIVERSITY CLONE WEBSITE"** is carried out by **Disha Goyal ENG24CT0035, Nandini Jadhav ENG24CT0043, Janhavi Pagare ENG24CT0050, Varsha N A ENG24CT0062, Thanish ENG24CT0021,** bonafide students of Third semester of Bachelor of Technology in Computer Science and Engineering at the School of Engineering, Dayananda Sagar University, Bangalore in partial fulfillment for the award of degree in Bachelor of Technology in Computer Science and Engineering, during the year **2025-2026**.

Dr. Santosh Kumar J

Associate Professor
Dept. of CST, School of Engineering Dayananda Sagar University
Date:

Dr. Shahina Parveen

Chairperson, CST
School of Engineering
Dayananda Sagar University
Date:

DECLARATION

We, **Disha Goyal (ENG24CT0035), Nandini Jadhav (ENG24CT0043), Janhavi Pagare (ENG24CT0050), Varsha N A (ENG24CT0062), Thanish (ENG24CT0021)** are students of Third semester B. Tech in **Computer Science and Engineering**, at School of Engineering, **Dayananda Sagar University**, hereby declare that the Mini Project titled **"Dayananda Sagar University Clone Website"** has been carried out by us and submitted in partial fulfilment for the award of degree in **Bachelor of Technology in Computer Science and Technology** during the academic year **2025-2026.**

Name of the student- Disha Goyal

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INTRODUCTION

The Student Portal System is a full-stack web-based application designed to automate student registration, authentication, data storage, and assistance using an AI-powered chatbot.
The system consists of three main components: Frontend, Backend, and an AI Chatbot module.
The platform aims to enhance user interaction by providing automated responses without human intervention, improving responsiveness and reducing manual workload.
The project primarily focuses on core development rather than infrastructure deployment.
There is no budget investment, and all the development is done using open-source tools and cloud hosting platforms.
The system is built to function efficiently for university-level usage, offering user registration, login-based data management, and intelligent chat-based support.
The major objectives of this system include:
Creating a functional backend for database operations, user authentication, and secure API handling.
Designing a minimal and responsive frontend UI for user form submission and chatbot interaction.
Implementing an AI chatbot that can communicate seamlessly and handle student queries 24/7. This report describes the entire architecture, libraries used, API implementation, model integration, UI behavior, system flow, and future scalability possibilities.

PROBLEM STATEMENT

Most university student portals lack modern UI/UX, making them difficult to navigate. Students often face issues like cluttered layouts, inaccessible mobile experiences, or outdated interfaces. This project addresses these concerns by developing a clean, responsive, modern, and interactive dashboard system tailored for student use.

PURPOSE OF THE PROJECT

The objectives of this project are:

- To create a functional and visually appealing student portal interface
- To provide secure login and credential validation
- To implement a dashboard environment containing academic sections
- To showcase the use of HTML, CSS, JavaScript, and responsive UI techniques
- To demonstrate good design principles and smooth user interaction

SCOPE OF THE PROJECT

Frontend Features

- Fully styled login page
- Theme-based dashboard page
- Courses overview
- Assignment list with due-date highlights
- Animated progress bars
- Tab-based navigation
- Statistical dashboard cards
- Fully responsive layout
- Optional dark mode support

Backend Features

- Basic login authentication
- Credential validation
- Error reporting

TECHNOLOGIES USED

Frontend

- HTML5
- CSS3 (Variables, Grid, Flexbox, Transitions)
- Vanilla JavaScript
- Custom CSS design system

Backend

- Node.js
- Express.js

DEVELOPMENT

Design Objectives

The frontend was created with these goals:
• Clean and professionally modern university UI
• Easy navigation and well-structured dashboard layout
• Soft color palette with yellow/grey theme
• Smooth animations and transitions
• High readability and spacing
• Device-responsive adaptability

UI/UX Guidelines

Following principles were adopted:
• Proper contrast between text and background
• Consistent spacing, padding, and alignment
• Smooth hover animations and visual feedback
• Minimalistic yet visually appealing colors
• Section-based dashboard for clarity

Modular CSS Structure

- Root Variables: Theme colors, shadows, gradients
- Login Styling: Form, inputs, buttons, hover states
- Dashboard Styling: Cards, sections, layouts
- Components: Course cards, assignments, tabs
- Dark Mode Overrides: Background and text swaps
- Responsive Media Queries: For tablet and mobile layouts

This section emphasizes scalability and maintainability.

Responsive Layout Structure
Using CSS Grid and Flexbox:

- Dashboard transforms to a single-column layout on mobile
- Cards auto-fit using grid-template-columns
- Headers adjust into a vertical stack
- Text and padding scale smoothly

Key Interface Components

- Login Form
- Input validation
- Smooth hover color transition
- Dedicated links for password help
- Centralized layout for focus
- Dashboard Header
- Student welcome text
- Logout/close button
- Clean card-like structure
- Stats Section
- Grid-based layout displaying:
  • Total courses
  • Pending assignments
  • Attendance/other fields
  • Animated hover elevation
- Courses Section
- Each course card contains:
  • Course name
  • Description
  • Hover slide animation
  • Gradient highlight on hover
- Assignments
- Each assignment item displays:
  • Title
  • Due date (highlighted in red)
  • Course reference
  • Small textual description
- Progress Bars
- Dynamic yellow gradient fill
- Smooth width animation
- Clear percentage representation
- Tabs System
- Allows switching between:
  • Overview
  • Courses
  • Assignments
  • Analytics or other sections
- Tabs include active/inactive state indicators.
- Dark Mode Implementation
- Background switches to darker tones
- Cards & containers adjust automatically
- Yellow theme preserved for contrast
- Text colors replaced with lighter variants
- *Dark mode is essential for modern accessibility.*

Backend Development, System Workflow, and Security

Backend Development

Purpose of Backend

The backend provides the login functionality required to authenticate students and allow dashboard access.

API Route

- POST /login
- Accepts email and password
- Validates input
- Verifies against stored credentials
- Responds with success or error message

Login Validation Flow

- User submits login form
- Frontend sends request to backend
- Backend validates data
- Username/password match → dashboard loads
- If incorrect → error message returned

Security & Error Handling

Invalid credentials handling

- Error responses for missing fields
- Prevention of access without login
- Clean and user-friendly feedback messages

System Workflow

Login Workflow

User → Login Inputs → Validation → Backend Auth → Dashboard Display

Dashboard Loading

After login, dashboard components load sequentially:

- Stats grid
- Course cards
- Assignments
- Progress indicators
- Tabs

UI Interaction Flow

- Tab switching
- Hover animations
- Dark mode toggles
- Dashboard closing
- Responsive rearrangements

Security Features

Client-side Validation

Prevents incomplete or incorrect forms.

Session Logic

Ensures data is shown only after successful login.

Secure UI Rendering

Dashboard is hidden until user is authenticated.

Responsive Design

- Desktop: Multi-column grid, full layout.
- Tablet: Reduced cards reduced width.
- Mobile: Single-column layout, simplified navigation

The backend infrastructure securely manages user authentication and access to the student dashboard. It processes login requests, validates credentials, and ensures sensitive data is only accessible to authorized individuals, maintaining the integrity and privacy of the DSU website's student portal.

Backend Development Details

The backends' core purpose is to authenticate students for dashboard access via a dedicated POST /login API route. This endpoint accepts user credentials, validates them against stored data, and responds with either success for dashboard access or an error message for invalid credentials.

The login validation flow begins when a user submits the login form, sending a request to the backend. If credentials match, the dashboard loads; otherwise, an error message is returned to guide the user. Robust security and error handling prevent unauthorized access and provide clear feedback.

System Workflow Overview

The system workflow starts with user login inputs and client-side validation before backend authentication. Upon successful authentication, the student dashboard is displayed, with components loading sequentially for optimized performance and user experience.

The UI interaction flow includes tab switching, hover animations, dark mode toggles, and dashboard closing procedures. It also features responsive rearrangements across devices, ensuring a consistent and intuitive experience.

Enhanced Security Features

The DSU website incorporates client-side validation to prevent incomplete forms and reduce server load. Robust session logic ensures sensitive data is only displayed after successful login. Secure UI rendering keeps dashboard content hidden until user authentication is complete.

Comprehensive Responsive Design

The responsive design adapts seamlessly across devices for optimal viewing.

- Desktop: Multi-column grid
- Tablet: Cards with reduced widths
- Mobile: Simplified, single-column layout for intuitive navigation and readability.

The backend infrastructure securely manages user authentication and access control for the student dashboard. It processes login requests, validates credentials, and ensures sensitive student data is only accessible to authorized individuals. This foundational layer is crucial for maintaining the integrity and privacy of the DSU website's student portal.

Backend Development Details

The backend facilitates student login, authenticating them for personalized dashboard access via a POST /login API endpoint. This endpoint accepts user credentials for rigorous validation against a secure storage mechanism. Based on verification, it responds with success for dashboard access or a detailed error message for incorrect credentials.

The login validation starts when a user submits the form, triggering a request to the backend for data processing. If credentials match, the dashboard loads; otherwise, an informative error guides the user. Robust security and error handling prevent unauthorized UI access before successful login, providing user-friendly feedback.

System Workflow Overview

The system workflow begins with user login inputs, validated both client-side and by the backend for authentication. Upon successful authentication, the student dashboard is displayed. Dashboard components load sequentially to optimize performance, starting with static elements and then dynamic content like course cards and assignment lists.

The UI interaction flow includes dynamic elements such as seamless tab switching and hover animations, alongside dark mode functionality. The system also manages dashboard closing procedures and adapts responsively across devices for a consistent experience.

Enhanced Security Features

The DSU website incorporates several security features to protect user data and ensure a secure browsing environment. Client-side validation prevents incomplete submissions, while robust session logic ensures sensitive data is displayed only after successful login. Secure UI rendering practices further hide dashboard content until full authentication, preventing potential data breaches.

Comprehensive Responsive Design

The design principles emphasize a fully responsive layout, adapting seamlessly across various devices for an optimal experience.

- Desktop: Multi-column grid for comprehensive information
- Tablet: Refined layout with adjusted content for reduced screen widths
- Mobile: Simplified, single-column layout optimized for smaller screens and touch interactions

The backend provides login functionality to authenticate students, granting them secure dashboard access. This ensures only authorized users view the student portal content.

API Route

A dedicated POST /login API endpoint handles authentication requests by:

- Accepting email and password credentials from the frontend.
- Validating inputs to prevent errors and security vulnerabilities.
- Verifying credentials against user data.
- Responding with a success message for dashboard access or an error if authentication fails.

Login Validation Flow

The login process involves a user submitting credentials from the frontend to the backend. The backend verifies this data; if credentials match, the dashboard loads. Otherwise, an error message is returned to the user.

Security & Error Handling

Robust security and error handling are integrated. This includes graceful handling of invalid credentials, specific error messages for missing fields, and preventing unauthorized UI access. User-friendly feedback guides users effectively.

System Workflow

The overall system workflow is designed for efficiency and security.

Login Workflow

User → Login Inputs → Validation → Backend Authentication → Dashboard Display
This linear process ensures data integrity and security at each step.

Dashboard Loading

Once authenticated, dashboard components load sequentially for a smooth experience. This includes the class sign-up, course cards, assignments, progress indicators, and tab navigation. Staggered loading prevents blank screens and improves perceived performance.

UI Interaction Flow

Beyond initial loading, UI interaction covers dynamic elements like seamless tab switching, hover effects, and mode toggles, dashboard loading, and responsive rearrangements.

This adapts the layout to different screen sizes.

Security Features

Several key security features fortify the system:

- Client-side Validation: Prevents incomplete or incorrectly formatted forms from reaching the backend, reducing server load and improving user experience.
- Session Logic: Ensures secure data and dashboard content are only displayed after successful login, preventing privacy and system integrity issues.
- Secure Rendering: Keeps the entire dashboard hidden until full authentication, providing a critical barrier against unauthorized access and content exposure.

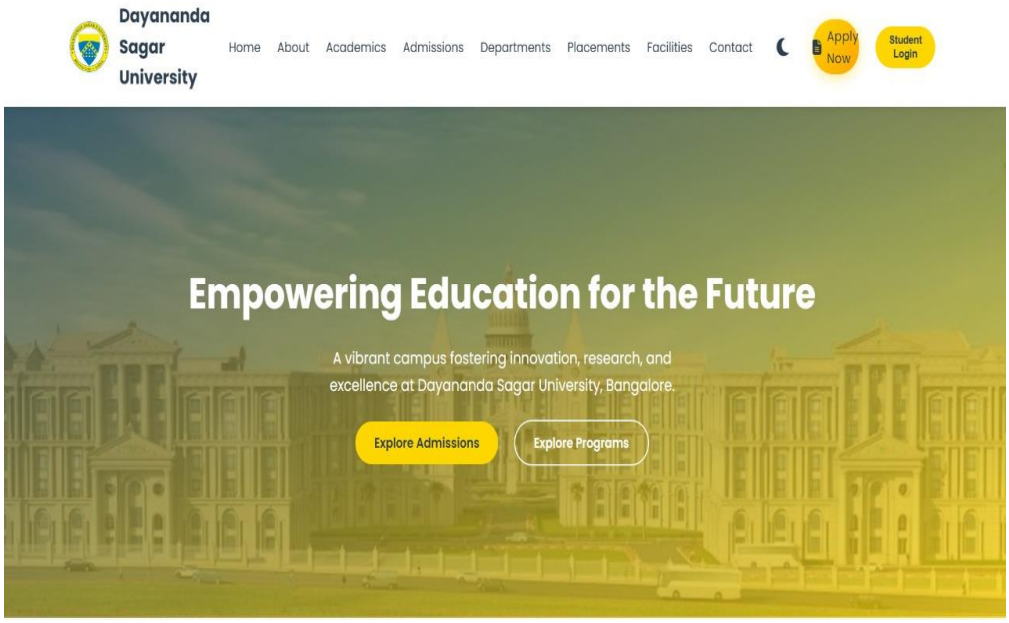
Responsive Design

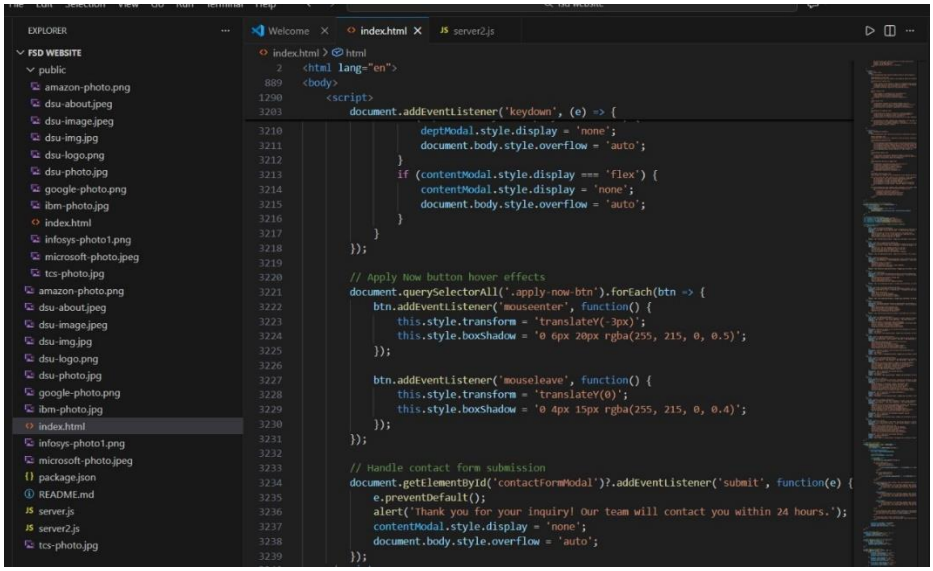
The design prioritizes a responsive user experience across all devices:

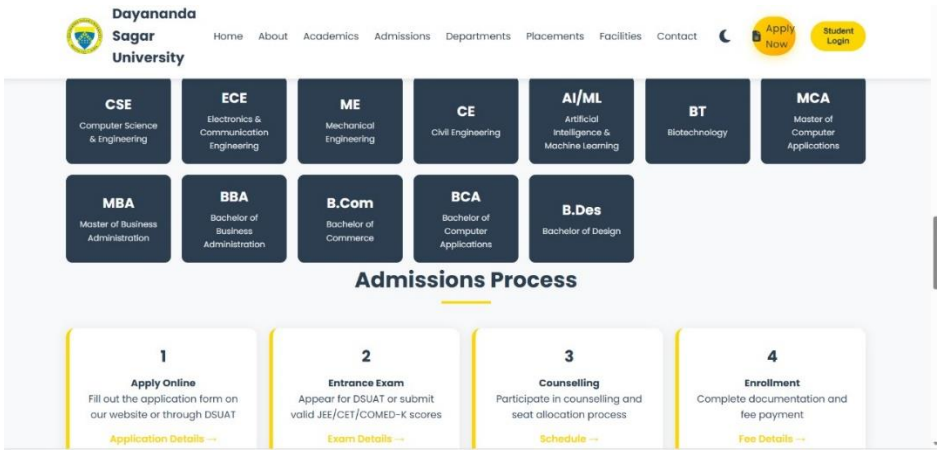
- Desktop: Multi-column grid layout with full features and content for an expansive view.
- Tablet: Refined layout with reorganized and resized cards for readability and functionality.
- Mobile: Simplified, single-column layout with streamlined navigation and tab usage for consistent experience.

Sample Code / Screenshots

public	02-12-2025 01:35	File folder	
amazon-photo	20-11-2025 00:49	PNG File	4 KB
dsu-about	20-11-2025 00:54	JPEG File	8 KB
dsu-image	20-11-2025 00:38	JPEG File	11 KB
dsu-img	20-11-2025 00:56	JPG File	646 KB
dsu-logo	19-11-2025 23:03	PNG File	64 KB
dsu-photo	20-11-2025 00:03	JPG File	130 KB
google-photo	20-11-2025 00:41	PNG File	4 KB
ibm-photo	20-11-2025 00:48	JPG File	5 KB
index	04-12-2025 09:24	Chrome HTML Do...	164 KB
infosys-photo1	20-11-2025 00:47	PNG File	6 KB
microsoft-photo	20-11-2025 00:49	JPEG File	5 KB
package	02-12-2025 01:35	JSON Source File	1 KB
README.md	02-12-2025 01:35	MD File	2 KB
server	02-12-2025 01:35	JavaScript Source ...	4 KB
server2	04-12-2025 09:18	JavaScript Source ...	8 KB
tcs-photo	20-11-2025 00:49	JPG File	6 KB




EXPLORER
FSD WEBSITE
public
amazon-photo.png
dsu-about.jpeg
dsu-image.jpeg
dsu-img.jpg
dsu-logo.png
dsu-photo.jpg
google-photo.png
ibm-photo.jpg
index.html
infosys-photo1.png
microsoft-photo.jpeg
tcs-photo.jpg
amazon-photo.png
dsu-about.jpeg
dsu-image.jpeg
dsu-img.jpg
dsu-logo.png
dsu-photo.jpg
google-photo.png
ibm-photo.jpg
index.html
infosys-photo1.png
microsoft-photo.jpeg
package.json
README.md
server.js
server2.js
tcs-photo.jpg
Welcome
index.html
server2.js
index.html > html
<html lang="en">
<body>
<script>
document.addEventListener('keydown', (e) => {
deptModal.style.display = 'none';
document.body.style.overflow = 'auto';
}
if (contentModal.style.display === 'flex') {
contentModal.style.display = 'none';
document.body.style.overflow = 'auto';
}
}
});
// Apply Now button hover effects
document.querySelectorAll('.apply-now-btn').forEach(btn => {
btn.addEventListener('mouseenter', function() {
this.style.transform = 'translateY(-3px)';
this.style.boxShadow = '0 6px 20px rgba(255, 215, 0, 0.5)';
});
btn.addEventListener('mouseleave', function() {
this.style.transform = 'translateY(0)';
this.style.boxShadow = '0 4px 15px rgba(255, 215, 0, 0.4)';
});
});
// Handle contact form submission
document.getElementById('contactFormModal')?.addEventListener('submit', function(e) {
e.preventDefault();
alert('Thank you for your inquiry! Our team will contact you within 24 hours.');
contentModal.style.display = 'none';
document.body.style.overflow = 'auto';
});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MBA
Master of Business Administration
BBA
Bachelor of Business Administration
B.Com
Bachelor of Commerce
BCA
Bachelor of Computer Applications
B.Des
Bachelor of Design
Admissions Process
1
Apply Online
Fill out the application form on our website or through DSUAT
Application Details →
2
Entrance Exam
Appear for DSUAT or submit valid JEE/CET/COMED-K scores
Exam Details →
3
Counselling
Participate in counselling and seat allocation process
Schedule →
4
Enrollment
Complete documentation and fee payment
Fee Details →

Conclusion

The DSU Website portal successfully demonstrates strong frontend engineering with clean design, responsive layout, and smooth navigation. It provides an effective foundation for institutional student dashboards and reflects modern web development standards.

The system combines aesthetic design, functional usability, and fully responsive implementation, making it suitable for academic submission and scalable expansion.

REFERENCES

1. **Node.js Documentation** — https://nodejs.org
2. **Tailwind CSS Documentation** — https://tailwindcss.com