MANIPAL INSTITUTE OF TECHNOLOGY
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Mini Project Report
of
Internet Technologies Lab (CSE 3262)

Student Life Cycle Management System

SUBMITTED TO
Department of Computer Science & Engineering
by

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Manipal Institute of Technology, Manipal.
April 2023

MANIPAL INSTITUTE OF TECHNOLOGY
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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

Manipal
12/05/2023

CERTIFICATE

This is to certify that the project titled **Student Life Cycle Management System** is a record of the bonafide work done by **Student(s) (Reg. No. 200905342, 200905358)** submitted in partial fulfilment of the requirements for the award of the Degree of Bachelor of Technology (B.Tech.) in COMPUTER SCIENCE & ENGINEERING of Manipal Institute of Technology, Manipal, Karnataka, (A Constituent Institute of Manipal Academy of Higher Education), during the academic year 2022-2023.

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Chapter 1: INTRODUCTION

Technology has taken a central role in the education industry. Universities and colleges are adopting various software solutions to manage their student's academic and administrative records efficiently. The Student Life Cycle Management website is one of the many websites used by universities to manage student's academics efficiently. It is a single portal through which all student-related activities such as course registration, grading, attendance, and other academic-related functions can be accessed. The website's primary goal is to provide a user-friendly interface for students, instructors, and administrators, which will help them to manage their academic life cycle with ease.

We have designed a student lifecycle management website using the Django web framework. Django is a high-level Python web framework that is widely used in web application development. It provides several built-in features, such as authentication, URL routing, and template rendering, that make web development more accessible and efficient.

Chapter 2: PROBLEM STATEMENT & OBJECTIVE

The traditional method of manually entering grades and attendance in records is quite tedious and time-consuming. This system often leads to errors, resulting in incorrect records. A web based Student Life Cycle Management System aims to provide a comprehensive solution to this problem. The website allows students to register for courses and access their grades and attendance for each course. The website also provides an interface for admin and teachers to record attendance and grade for each student and create accounts for new admissions.

The traditional method of managing student records involves a lot of paperwork, this complicates the procedure as teachers have to manually record attendance and grades for each student. This can be frustrating for students as they may not always be able to access their grades and attendance records whenever they want. They may have to wait for a specific time or date to receive their results. This in turn puts the student at a disadvantage as they cannot use their time as optimally as possible

Student Life Cycle Management addresses the inefficiency and inaccuracy of the traditional method of managing student records. The objective is to provide a comprehensive, reliable, and user-friendly solution to this problem by developing a website.

The website allows students to register for courses, access their grades and attendance records. Additionally teachers will have an interface to record attendance and grades. The website will be accessible 24/7, ensuring that students can access their records whenever they want. Websites also have several security features, such as password hashing and CSRF protection, to prevent unauthorized access.

Chapter 3: METHODOLOGY

We used a systematic approach to design and develop the student life cycle management website using the Django web framework. The development process consisted of several steps, including creating a database using django models, implementing user authentication, designing the user interface using django views, and implementing the website's functionality using django forms.

We started by creating a database to store all the necessary information required for the website's functioning. The django model script consists of several tables: registration, subject, attendance, and grade. The registration table contained information about each student, such as their name, email, student ID, parents names, permanent address, etc. The subject table contains information about each course. It is used to create a webpage through which students can register for courses of their interest. The attendance and grade tables are used to show the attendance and grades of each student. These are only accessible through the backend by teachers.

We implemented user authentication using Django's built-in authentication system. The authentication system allowed users to create an account, log in, and log out of the website.

We designed the user interface using HTML, CSS, and Bootstrap. The user interface was designed to be user-friendly and responsive, allowing users to access the website from different devices. The design was also consistent throughout the website, making it easy for users to navigate and use the website's features.

We created several views to handle different tasks such as course registration, attendance, and grade submission. For example, using the view created for the landing page the user can navigate to either login page or read more about the webpage he/she is currently on.

We used Django's built-in form system to create forms for course registration. The students fill their preferred courses through the form and it is stored in the backend corresponding to their name. The forms were designed to be user-friendly, making it easy for students to submit information. To prevent unauthorized access we made use of CSRF protection..

We thoroughly tested the website to ensure that it was stable and reliable. We tested the website's functionality, user interface, and security features to ensure that they were working correctly. We also tested the website on different devices and web browsers to ensure that it was responsive and compatible.

Overall, our methodology ensured that we developed a high-quality website that met the project's objectives and requirements.

Chapter 4: RESULTS & DISCUSSION

Our student life cycle management website has several features that make it a useful tool for managing student records. Students can easily register for courses, view their grades, and check their attendance. The website also provides teachers with an interface to record attendance and grades for each student, making the grading process more efficient.

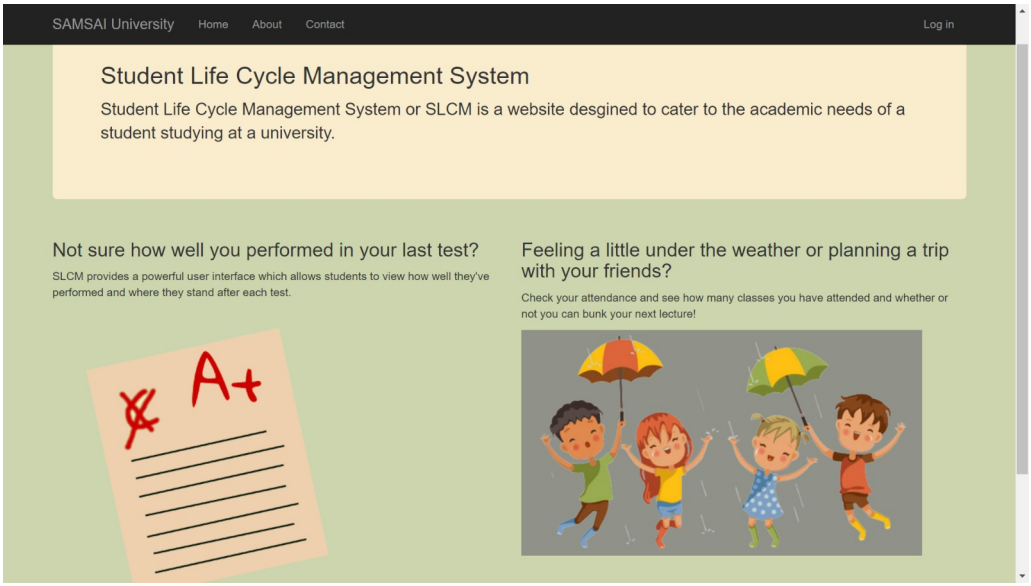

Figure 1: Landing Page

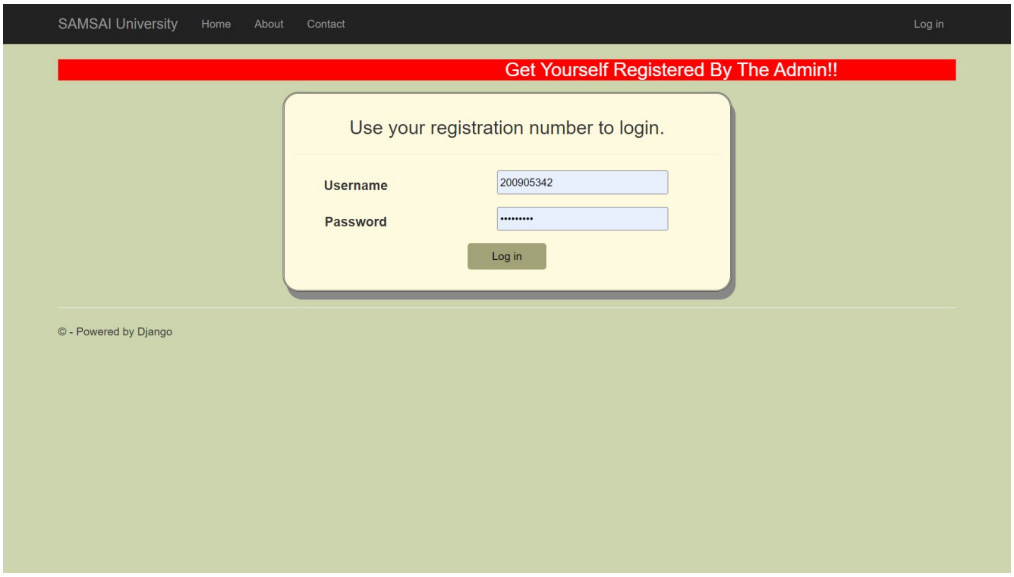

Figure 2: Login Page

Figure 3: Student Portfolio

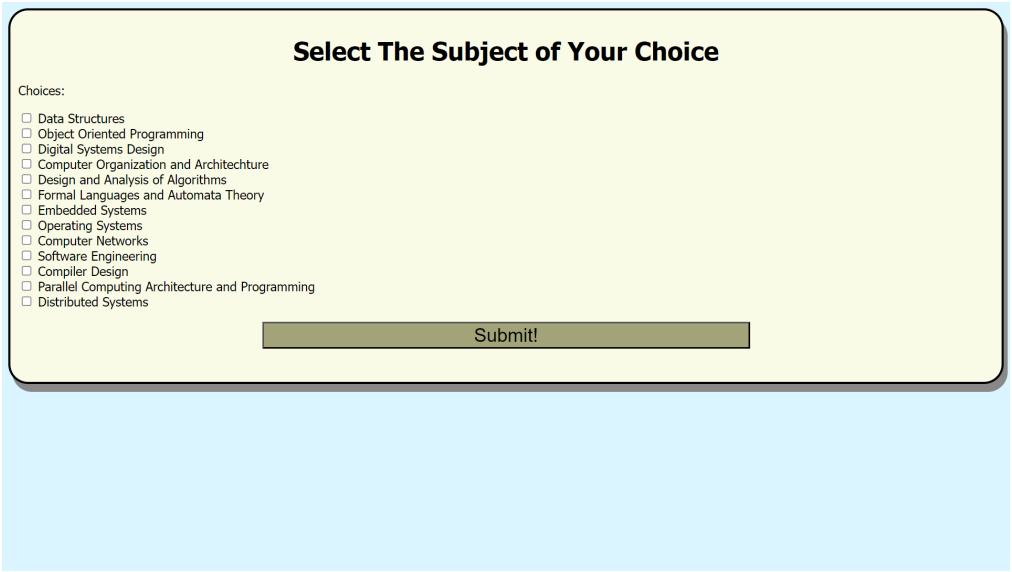

Figure 4: Select Subjects Page

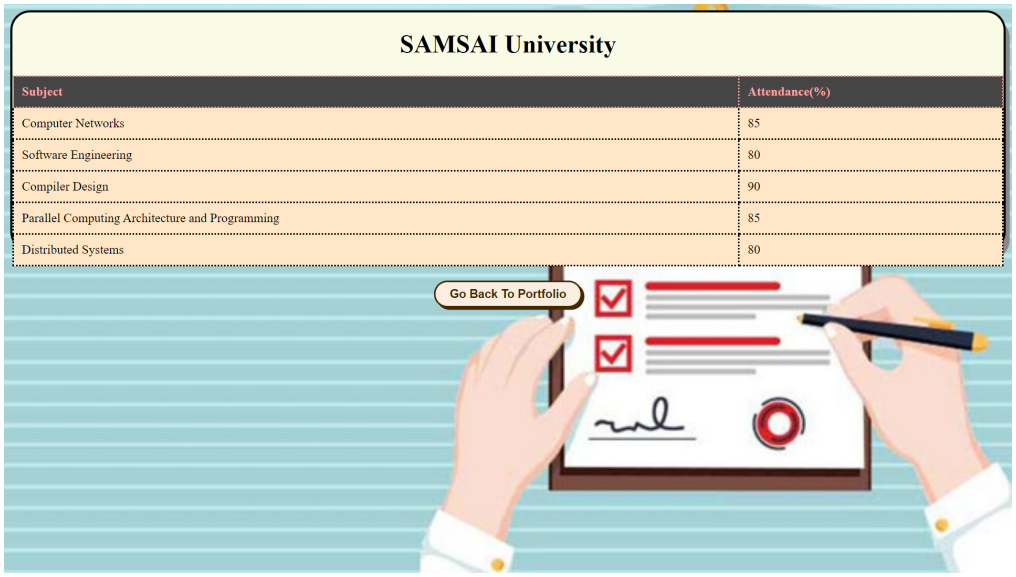

Figure 5: View Attendance Page

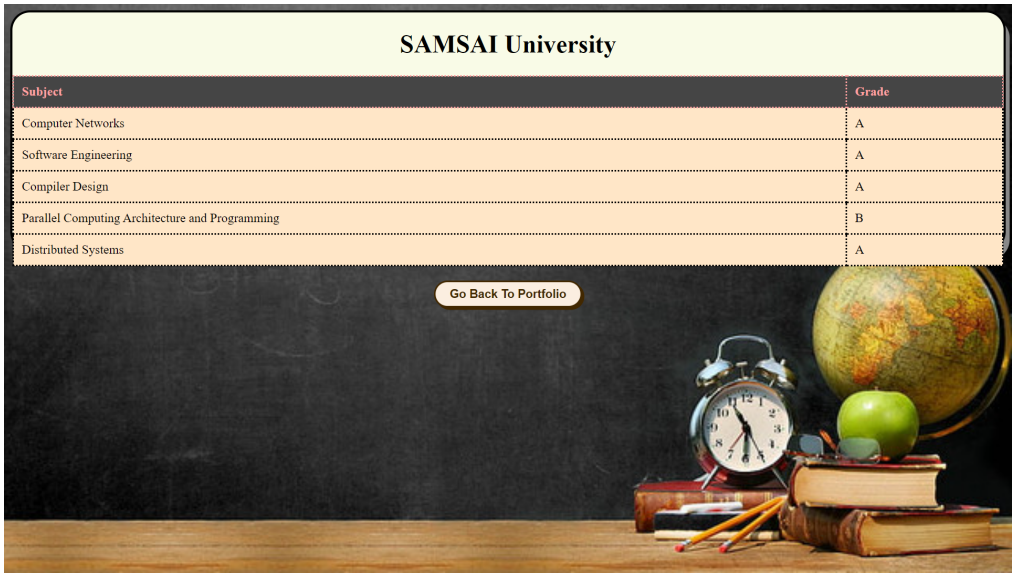

Figure 6: View Grades Page

Chapter 5: CONCLUSION & FUTURE ENHANCEMENT

The student life cycle management website has been designed to simplify and streamline various student management processes. It offers a centralized platform for managing student records, which is easily accessible to all stakeholders. The website has been developed using the Django framework, which provides a range of built-in features and tools that simplify the development process. The website has been tested and deployed, and has shown promising results in terms of scalability, performance, and security. In future, we plan to add more features such as fee management and secure payment portal, library management, and hostel management to make the website more comprehensive and useful for students, parents, teachers, and administrators.

REFERENCES

1. https://docs.djangoproject.com/en/4.2/intro/
2. https://stackoverflow.com/