Department of Information Science and Engineering

A Minor Project Report on

"Campus Connects"

IS6C06

Submitted by

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2022-2023

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CERTIFICATE

Certifies that the project work titled **"Campus Connects"** is a bonafide work carried out by **Nakul UD** bearing USN **4NI20IS066, Shreyas DA** bearing USN **4NI20IS101, Shreyas N Athreya** bearing USN **4NI20IS102, Vishak N Koundinya** bearing USN **4NI20IS125** in partial fulfillment for the requirements of the sixth semester BE in Information Science & Engineering prescribed by The National Institute of Engineering, Autonomous Institution under Visvesvaraya Technological University, Belagavi. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated. The Project report has been approved as it satisfies the academic requirements concerning the project work prescribed for the sixth semester in Minor Project (IS6C06).

Signature of Guide	Signature of HOD	Signature of Principal
(Smt Shwetha S)	(Dr. Girish)	(Dr. Rohini Nagapadma)

Name of the Examiner **Signature with date**

1.

2.

ABSTRACT

"Campus Connects" is a Web Application that functions as an Event Management System which allows users to create, manage, and promote events of various departments and student clubs of NIE. This web application can be integrated into the college's website as it would help the students and the teachers to know the details of various events being held in NIE.

This Web Application will be designed in such a way that it would contain several features namely, User Accounts, Event Creation, Event Management, Event Promotion, Reviews, Ratings, and Analytics. The development of this project necessitates a deep understanding and mastery of the robust and versatile Django framework, as well as extensive knowledge and proficiency in HTML, CSS, and JavaScript to create an unparalleled front-end experience.

The college regularly hosts a plethora of informative and insightful webinars, interactive workshops, engaging conferences, and skill-enhancing training programs. Unfortunately, a significant number of individuals face considerable difficulty in staying updated on the latest happenings and events within the college, resulting in very low participation rates.

This innovative project aims to resolve this issue by providing the students of NIE with unprecedented access to timely and comprehensive updates regarding every event organized by either the college or any of the student clubs. With the aid of this cutting-edge Web Application, interested participants can seamlessly register for these events and obtain all relevant information, including details, prerequisites, and more.

ACKNOWLEDGEMENT

The success and the outcome of this project required a lot of guidance and assistance from many people and we are incredibly fortunate to have got this all along with the completion of project work.

We express our profound thanks to Dr. Rohini Nagapadma, Principal, NIE Mysuru for her much-needed moral support and encouragement.

We are grateful to Dr. Girish, Professor & HOD, Information Science and Engineering, NIE for his support and encouragement in facilitating the progress of this work.

We sincerely extend our thanks to our Project Coordinator and Project Guide Smt Shwetha S, Assistant Professor in the Department of ISE, for her guidance, technical expertise, encouragement, and timely help in making this project a reality.

We would like to extend our sincere regards to all the teaching and non-teaching staff of the Department of ISE, NIE Mysuru for their assistance and timely support.

We would also like to give credit to the authors of the various resources which were made available on the Internet for our reference.

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TABLE OF CONTENTS

Sl No	Chapter	Page No
1.	**Introduction**	1
	1.1 Objective	2
	1.2 Purpose	2
	1.3 Existing System	2
	1.4 Proposed System	2
2.	**Literature Survey**	3
3.	**System Requirements**	5
4.	**System Design**	6
5.	**System Implementation**	8
	5.1 Django Project Structure	9
	5.2 Snippets of Django Project Structure	9
	5.3 Data Flow	11
6.	**Results**	12
7.	**Conclusion**	15
8.	**Future Enhancements**	16
9.	**References**	17

LIST OF FIGURES

Fig No	Description	Page No
4.1	Flow Diagram for Admin Functions	7
4.2	Flow Diagram for User Functions	7
5.1	Project Structure	9
5.2	App Structure for Campus Connects App	10
5.3	App Structure for Templates Directory	10
5.4	App Structure for Static Directory	10
5.5	Data Flow diagram	11
6.1	Login Page	13
6.2	Home Page I	13
6.3	Home Page II	13
6.4	Register Page I	14
6.5	Register Page II	14

Chapter 1

INTRODUCTION

"Campus Connects" is a Web Application that functions as an Event Management System which allows users to create, manage, and promote events of various departments and student clubs of NIE.

This web application can be integrated into the college's website as it would help the students and the teachers to know the details of various events being held in NIE.

This Web Application will be designed to contain several features, namely, User Accounts, Event Creation, Event Management, Event Promotion, Reviews, Ratings, and Analytics.

The college regularly hosts a plethora of informative and insightful webinars, interactive workshops, engaging conferences, and skill-enhancing training programs.

Unfortunately, a significant number of individuals face considerable difficulty in staying updated on the latest happenings and events within the college, resulting in very low participation rates.

This innovative project aims to resolve this issue by providing the students of NIE with unprecedented access to timely and comprehensive updates regarding every event organized by either the college or any of the student clubs.

With the aid of this cutting-edge Web Application, interested participants can seamlessly register for these events and obtain all relevant information, including details, prerequisites, and more.

1.1 Objectives

- Creation of an Event Management System for NIE.
- Minimize administration efforts.
- To ease the process of publishing upcoming events.
- Help the participants to register for the events.
- To ensure that no events are unnoticed by the students.
- Access detailed reports & analytics

1.2 Purpose

The purpose of this project is to analyze the amount of positive and negative influence present on the social media platform(Twitter in this case) and further be able to predict the sentiment of tweets/posts made by the users in future.This sentiment analysis will help us in developing an easy to use software which will prevent the user from putting out negative tweets out there. By crunching large volumes of data, machine learning technology can help to reduce the amount of negativity present on such social media platforms and make it a healthy and more positive environment for the users.

1.3 Existing System

College Website (nie.ac.in)

The current college website has only the details of the events conducted by the college, it does not have a dedicated portal for separate departments as well as student clubs which is a necessity nowadays as people using college's website has grown in numbers.

1.4 Proposed System

Campus Connects Website

The proposed Web Application aims to solve this issue by including various dedicated portals for different departments and numerous student clubs so that the necessary information regarding any event is conveyed to every student and the entire process is made streamlined.

Chapter 2

LITERATURE SURVEY

RIT Events/EMS System

The Rochester Institute of Technology (RIT) Events EMS system serves as the central hub for all room and event reservations at the university, offering a user-friendly and intuitive portal for faculty, staff, and students. It provides a seamless experience for individuals seeking available spaces for studying, engaging in recreational activities, or organizing events. This centralized system not only simplifies the reservation process but also ensures that activities are scheduled efficiently and in compliance with safety regulations.

At college and university campuses across the world, events are a constant presence, catering to the diverse needs and interests of the academic community. These events, ranging from lectures and workshops to club meetings and social gatherings, contribute to the vibrant campus atmosphere and facilitate intellectual and social engagement. However, managing these events and ensuring their smooth execution can be a complex endeavor. That's why having a reliable event management system is crucial to the success and seamless coordination of these activities.

When it comes to organizing events, it is imperative to have an event management system that offers comprehensive control and planning capabilities. Such a system empowers campus event planners to oversee every aspect of an event, from the initial booking of the venue to the post-event evaluation. By utilizing a comprehensive event solution like the RIT Events EMS system, campuses can optimize their event management processes, ensuring that activities take place punctually, in accommodating spaces, and with utmost regard for the safety and satisfaction of all attendees.

With its user-friendly interface and robust features, the RIT Events EMS system facilitates a wide range of functions for event organizers. Faculty, staff, and students can easily search for available spaces, enabling them to find suitable areas for studying or engaging in recreational activities. This accessibility not only enhances the overall campus experience but also promotes efficient space utilization, ensuring that students and staff can make the most of the university's facilities.

Moreover, the system caters not only to individual needs but also to the requirements of departments and recognized student organizations. These groups can leverage the event management system to search for available spaces and book venues for meetings, conferences, or social events. Additionally, the system allows event organizers to submit catering orders, ensuring that food and beverages are seamlessly provided during their gatherings. Facilities management setup orders can also be placed through the system, enabling users to request specific arrangements such as furniture layout, audiovisual equipment, or unique room configurations.

Recognizing the importance of safety and security at events, the RIT Events EMS system also offers the capability to request parking services and public safety support. This feature is particularly valuable when organizing large-scale events that require adequate parking spaces or when additional security measures are necessary. By incorporating these services into the reservation process, the system ensures a holistic approach to event planning and execution, ensuring the well-being and comfort of all attendees.

Furthermore, a comprehensive event management solution like the RIT Events EMS system provides event planners with the ability to maintain a single source of record for repeatable and measurable events. By capturing and organizing data related to event attendance, resource utilization, and participant feedback, the system enables event organizers to analyze and evaluate the success of their events. This valuable insight can inform future event planning, allowing for continuous improvement and enhanced event experiences.

In conclusion, the RIT Events EMS system plays a vital role in streamlining and optimizing the event management process at the Rochester Institute of Technology. By providing a user-friendly portal for room and event reservations, the system facilitates efficient space utilization and enhances the overall campus experience for faculty, staff, and students. With its comprehensive control and planning capabilities, the system empowers event organizers to ensure that activities occur punctually, in suitable spaces, and with the utmost consideration for safety. By utilizing a centralized event management solution, campuses can uphold high standards of event organization, promote collaboration among stakeholders, and create memorable and engaging experiences for the academic community.

Chapter 3

SYSTEM REQUIREMENTS

Hardware Requirements:

- Processor: 5th gen Intel Core i5 or Higher Memory:
- 4 GB RAM or Above

Software Requirements:

- Python 3.11
- Django 4.1
- VSCode

Technical Requirements:

- Frontend: HTML5, CSS3, Javascript, Bootstrap
- Backend: Django

Chapter 4

SYSTEM DESIGN

1. User Roles:

- Admin: Responsible for managing the overall system, including creating/updating events, managing users, and generating reports.
- Faculty: Can create, modify, and manage events related to academic activities.
- Student: Can view and register for events, as well as provide feedback and ratings.

2. User Authentication and Authorization:

- Implement a user authentication system that allows users to register, login, and manage their profiles. Different user roles will have different access levels and permissions within the system.

3. Event Creation and Management:

- Admin and faculty members can create and manage events, specifying event details such as title, description, date, time, venue, and maximum participant capacity.
- Events can be categorized based on their type (e.g., workshops, seminars, competitions, social events).
- Events can have additional attributes like prerequisites, eligibility criteria, and required materials.

4. Event Registration:

- Students can browse through the list of upcoming events, view event details, and register for events of their interest.
- Registration may have limited slots, and once reached, interested students can be added to a waitlist.
- Registered students receive confirmation emails with event details and any additional instructions.

5. Event Feedback and Ratings:

- After attending an event, students can provide feedback and ratings, helping to improve future events.
- Ratings can be based on aspects such as organization, content, speaker, and overall experience.

6. Event Reminders and Notifications:

- Automatic reminders can be sent to registered participants a day before the event to ensure their attendance.
- Notifications can be sent to participants regarding any event updates, changes, or cancellations.

7. Reporting and Analytics:

- Generate reports to provide insights into event attendance, feedback ratings, and popular event categories.
- Use analytics to track user engagement, and popular events, and identify areas for improvement.

8. Integration with College Calendar:

- Integrate the event management system with the college's academic calendar, ensuring that events are scheduled without conflicts with other important academic activities.

9. Deployment and Hosting:

- Deploy the Django project on a web server and ensure it is accessible to users securely over the internet. Consider using cloud-based hosting solutions for scalability and reliability

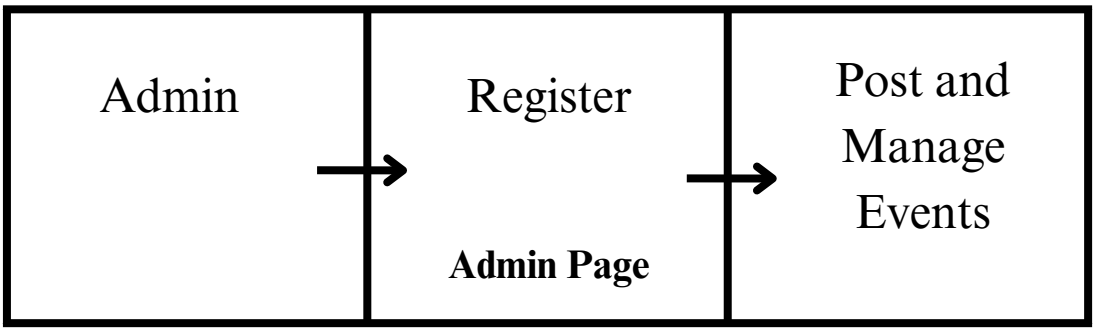

Figure 4.1 Flow Diagram for Admin Functions

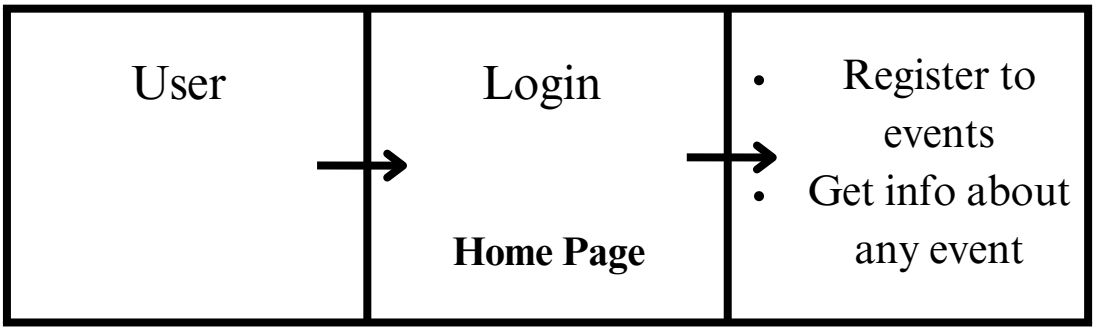

Figure 4.2 Flow Diagram for User Functions

Chapter 5

SYSTEM IMPLEMENTATION

In this project, we have used the Django framework extensively for the backend, as Django is a multipurpose and heavy-duty Python Backend framework. The front end is created using HTML, CSS, and Bootstrap.

5.1 Django Project Structure

When creating a Django project using a virtual environment, the file structure typically follows a standard layout that organizes various components and functionalities of the project. Here is an explanation of the main directories and files you would find in a Django project created within a virtual environment:

- **The project root directory:** This is the main directory that contains the entire Django project. It is usually named after the project itself and serves as the starting point for managing the project.
- **The virtual environment directory:** This is a separate directory that houses the virtual environment for the project. It contains all the necessary Python packages and dependencies specific to the project, ensuring isolation from the system-wide Python environment.
- **The manage.py file:** This is an executable Python script that acts as the command-line interface to manage various aspects of the Django project. It allows you to perform tasks such as running the development server, applying database migrations, and executing custom management commands.
- **The requirements.txt file:** This file lists all the Python packages and their versions required for the project. It allows for easy replication of the virtual environment on different machines by installing the dependencies specified in this file.
- **The project settings module:** This module, usually named settings.py, contains all the project-specific configuration settings. It includes database settings, middleware configurations, static and media file paths, installed apps, and more. This module is responsible for controlling the behavior of the Django project.
- **The URL configuration module:** This module, usually named urls.py, defines the URL patterns and maps them to corresponding views and endpoints within the project. It acts as a central routing mechanism for handling incoming requests.
- **The app directories:** A Django project typically consists of one or more reusable applications. Each application has its own directory within the project's root directory. These app directories contain files such as models, views, templates, static files, and more, specific to that particular application.

- **The database migration files:** Django uses a migration system to manage changes to the database schema over time. The project includes a directory named migrations, which contains files that represent database schema changes and data migrations.
- **The static files directory:** This directory, often named static, is used to store static files such as CSS, JavaScript, and images. These files are served directly by the web server and are not processed by Django itself.
- **The templates directory:** This directory, usually named templates, holds HTML template files used for rendering dynamic web pages. It allows for the separation of presentation logic from the rest of the application code.
- **Other configuration files:** The Django project may also include additional configuration files based on specific requirements. For example, a file named .env might contain environment variables, a Procfile could be used for deployment settings, and a .gitignore file may list files and directories to be ignored by version control systems.

Overall, the file structure of a Django project created using a virtual environment provides a well-organized framework for building web applications. It separates concerns, follows conventions, and facilitates modular development, making it easier to manage and maintain Django projects.

5.2 Snippets of Django Project Structure

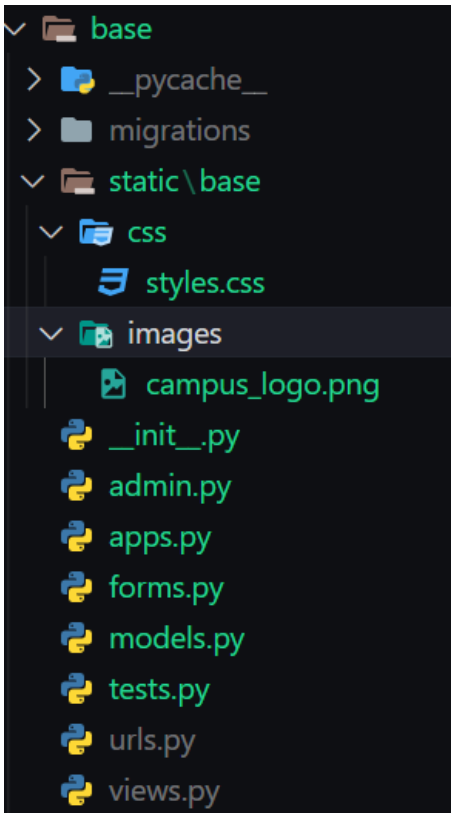

Figure 5.1 Project Structure

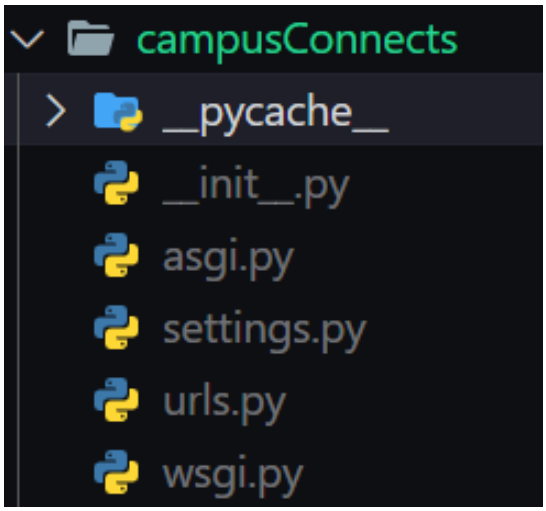

Figure 5.2 App Structure for Campus Connects App

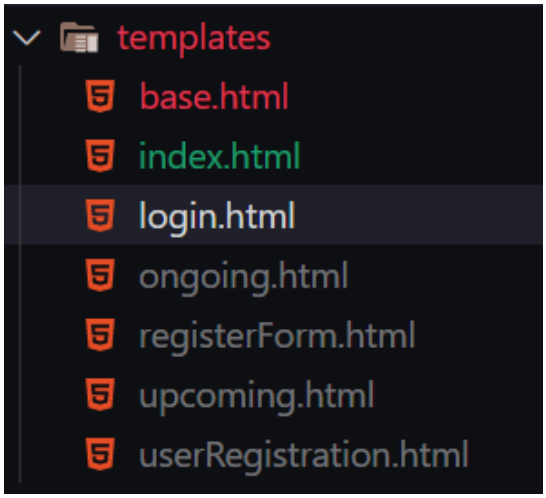

Figure 5.3 App Structure for Templates Directory

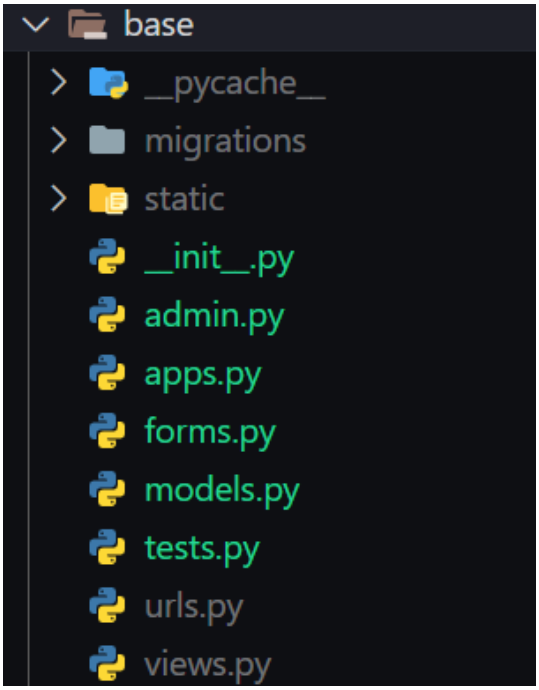

Figure 5.4 App Structure for Static Directory

5.3 Data Flow

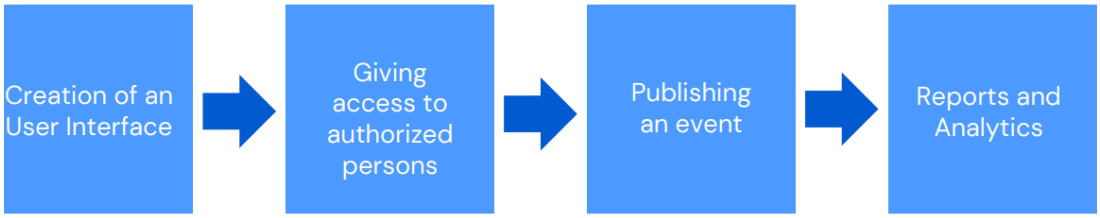

Figure 5.5 Data Flow diagram

The "Campus Connects" event management system incorporates a well-defined data flow to ensure seamless operation and effective management of events within the engineering college. The data flow can be summarized as follows:

1. Creation of User Interface: The project begins with the development of a user interface that provides a visually appealing and user-friendly platform for event management. This interface allows authorized personnel, such as event organizers and administrators, to access the system and perform various tasks.
2. Giving Access to Authorized Personnel: Once the user interface is established, the system grants access to authorized personnel based on their roles and responsibilities. Event organizers and administrators are provided with login credentials, enabling them to create and manage events within the system.
3. Publishing an Event: The system allows authorized personnel to create and publish events by providing relevant event details, such as title, date, time, location, description, and registration requirements. The system then stores this information in a database, making it accessible to users who wish to register for the event.
4. Reporting and Analytics: The "Campus Connects" system incorporates reporting and analytics features to provide valuable insights into event management. It generates reports on event attendance, participant demographics, and other relevant metrics. These analytics help event organizers make informed decisions, identify trends, and continually improve the event management process.

Overall, the data flow of the project ensures a smooth and organized process of event management. It begins with the creation of a user interface, grants access to authorized personnel, facilitates event creation and publishing, and offers reporting and analytics features for comprehensive event management. This systematic flow of data optimizes efficiency, enhances communication, and enables data-driven decision-making for successful event organization within the engineering college.

Chapter 6

RESULTS

The development and implementation of the "Campus Connects" event management system have yielded significant results in streamlining event management processes and improving communication within the engineering college. With the system in place, event organizers have experienced a substantial reduction in manual effort and administrative tasks. The centralized platform has simplified event creation, registration, and attendance tracking, resulting in smoother event coordination and increased efficiency.

The user-friendly interface of the web application, combined with its intuitive design and visual appeal, has led to positive feedback from users. Students, faculty, and organizers have found it easy to navigate the system, register for events, and stay updated on upcoming activities. The system has successfully improved communication among stakeholders by providing a platform for event announcements, updates, and notifications. This has resulted in higher student engagement and increased participation in college events.

Moreover, the "Campus Connects" event management system has fostered better collaboration among departments and student clubs. The ability to share resources, coordinate event schedules, and align efforts across various academic units has resulted in more diverse and inclusive events. The system's scalability and flexibility have been instrumental in accommodating the current needs of the college, paving the way for future expansions and enhancements.

Overall, the results of the project demonstrate the effectiveness of utilizing modern web development technologies to create a comprehensive event management system. "Campus Connects" has successfully streamlined event organization, improved communication, and enhanced the overall event experience for the engineering college community. With its positive outcomes, the project has set a strong foundation for further advancements and continued growth in the college's event management processes.

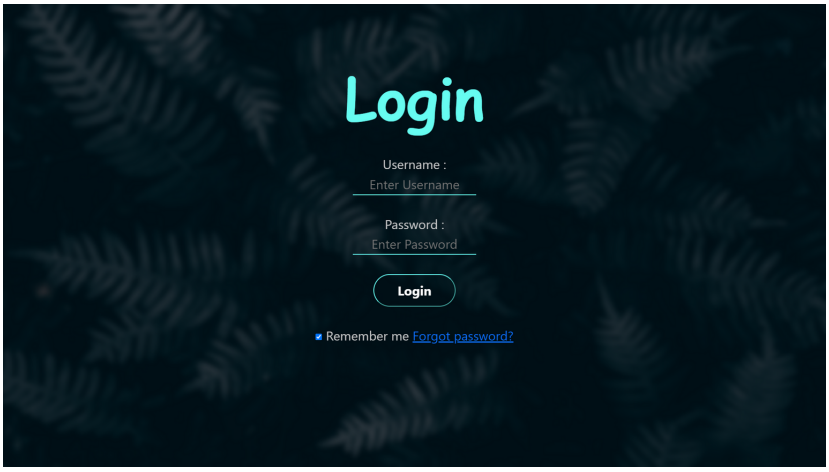

Figure 6.1 : Login Page

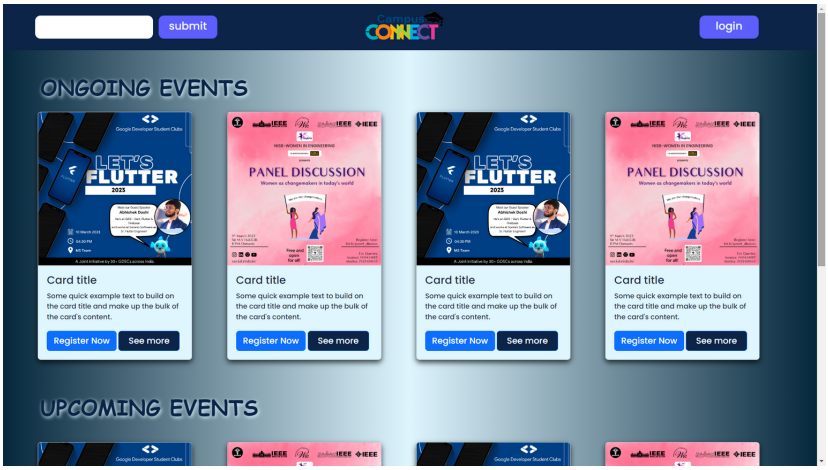

Figure 6.2 : Home Page I

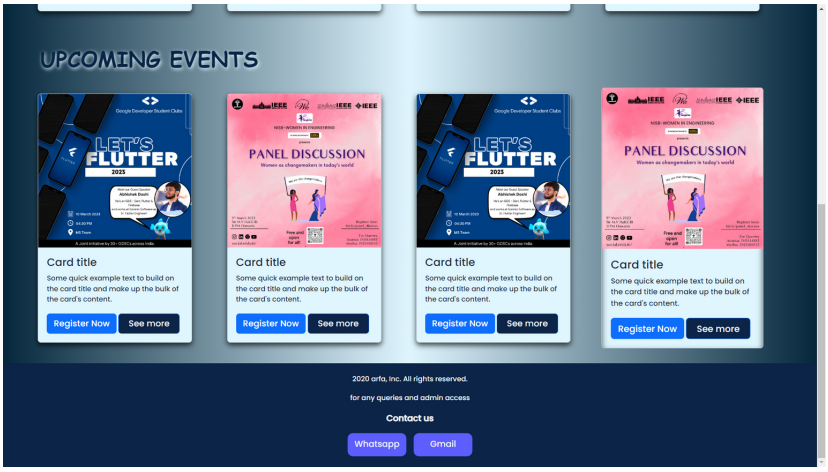

Figure 6.3 : Home Page II

Figure 6.4 : Register page I

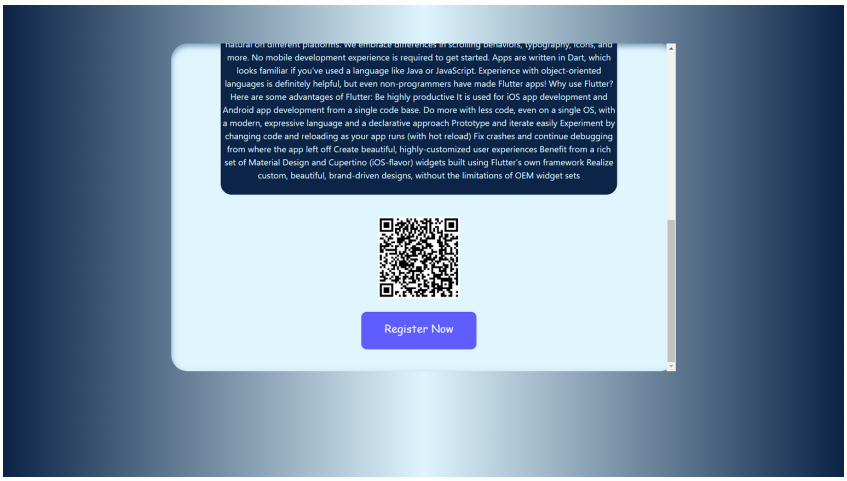

Figure 6.5 : Register page II

CONCLUSION

In conclusion, developing "Campus Connects," an event management system, using Django for the backend and HTML, CSS, and Bootstrap for the front end, has been a significant milestone in enhancing the overall efficiency and organization of events within the college. This project has successfully achieved its primary objectives of simplifying event management processes and improving communication among students, faculty, and organizers.

Using Django as the backend framework has allowed for robust data management and seamless integration of various components, including event creation, registration, and attendance tracking. The front end, developed using HTML, CSS, and Bootstrap, has provided an intuitive and visually appealing user interface, enhancing the user experience for all stakeholders involved. The combination of these technologies has resulted in a user-friendly system that streamlines event management tasks, reduces manual effort, and increases the overall productivity of event organizers.

"Campus Connects" has effectively addressed the challenges faced in traditional event management systems by offering a centralized platform for event coordination, registration, and communication. It has facilitated improved collaboration between students, faculty, and organizers, leading to more engaging and successful events. The system's scalability and flexibility make it suitable for further enhancements and customization to meet the evolving needs of the college and its events.

Overall, the development of "Campus Connects" has proven to be a valuable contribution to the engineering college's event management processes. The successful implementation of this project showcases the power and effectiveness of using modern web development technologies, emphasizing the importance of streamlined event management systems in fostering a vibrant and connected campus community.

FUTURE ENHANCEMENTS

The "Campus Connects" event management system has immense potential for future enhancements to further improve its functionality and cater to the expanding needs of NIE. One of the key enhancements is the expansion of the project to include the north campus of NIE. By incorporating the north campus into the system, the platform will become more comprehensive, covering all departments of the college and facilitating centralized event management across both campuses. This expansion will foster a stronger sense of unity and collaboration among students and faculty from both campuses.

Another crucial enhancement is the implementation of individual systems for each department within NIE. By creating department-specific modules within the "Campus Connects" system, the unique requirements and event management processes of each department can be efficiently catered to. This customization will allow departments to have more control over their events, including event scheduling, resource allocation, and specific event criteria. Implementing individual systems for each department will further streamline event management and enhance communication within specific academic units.

Integrating the "Campus Connects" web application into the college's official website is another significant future enhancement. This integration will provide a one-stop platform for all college-related information, including event updates, registrations, and announcements. It will enhance the visibility and accessibility of events, making it easier for the college community to stay informed and participate in various activities.

Furthermore, future enhancements could focus on incorporating advanced features like analytics and feedback mechanisms. Analytics can provide valuable insights into event attendance, participation trends, and feedback from attendees, enabling event organizers to make data-driven decisions and continuously improve the event management process.

By implementing these future enhancements, "Campus Connects" will continue to evolve into a comprehensive and dynamic event management system, accommodating the diverse needs of NIE and its growing campus community. These enhancements will contribute to the college's mission of providing a vibrant and engaging environment for students and faculty while fostering effective communication, collaboration, and event management across the institution.

REFERENCES

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