DONATION AND COMMUNITY WEBSITE FOR NIT ANDHRA PRADESH

by

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TADEPALLIGUDEM-534101, INDIA

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Thesis submitted to
National Institute of Technology Andhra Pradesh
for the award of the degree

of

Bachelor of Technology

by

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DECLARATION

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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Date:_____

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Date:_____

CERTIFICATE

It is certified that the work contained in the thesis titled "**DONATION AND COMMUNITY WEBSITE FOR NIT ANDHRA PRADESH**" by "CHEEPATI DINESH REDDY, bearing Roll No: 421127" and "BOTCHA PREM KUMAR,bearing Roll No: 421123" has been carried out under my supervision and that this work has not been submitted elsewhere for a degree.

Signature
Mrs. SRI SATYA MONICA BANDARU
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N.I.T. Andhra Pradesh
April, 2023

Acknowledgement

The satisfaction and euphoria that accompany the successful completion of any task would be incomplete without the mention of people who made it possible, whose constant guidance and encouragement crowned our efforts with success. It is a pleasant aspect that I have now the opportunity to express my gratitude for all of them.

We owe our sincere gratitude to our project guide Mrs. SRI SATYA MONICA BANDARU , Department of Computer Science, National Institute of Technology, Andhra Pradesh, who took keen interest and guided us all along, till the completion of our project work by providing all the necessary information and referred many websites .

We avail ourselves of this proud privilege to express our gratitude to all the faculty of the department of Computer Science and Engineering at NIT Andhra Pradesh for emphasizing and providing us with all the necessary facilities throughout the work. We offer our sincere thanks to all our fellow mates and other persons who knowingly or unknowingly helped us to complete this project.

LIST OF FIGURES

LIST OF ABBREVIATION

NOTATION	ABBREVIATION
HTML	HYPER TEXT MARKUP LANGUAGE
CSS	CASCADING STYLE SHEETS
PHP	HYPERTEXT PREPROCESSOR
SQL	STRUCTURED QUERY LANGUAGE
JS	JAVASCRIPT

Abstract

The aim of this project is to create a centralized platform for communication, collaboration, and fundraising within a college community. The platform includes two main components: a donation website and a community website. The donation website allows alumni, present students, and well-wishers to make donations through various payment methods such as UPI, net banking, cheques,payments through bitcoins and online payments. A form is also provided to collect donor details, donors has select to whom would they like to grant authorization for how to use the money that they donated. The community website works similar to Twitter, which provides a platform for students to communicate with each other and with the administration. The community website includes two components: a suggestion/request/thought section, where students can post comments and voice their opinions, and a section that displays comments from the first section that have received over 1000 likes and also displays the amount of money gathered from donations for students. This section provides the administration with a direct line of communication with students and a dedicated page contains how money is spent on solving students' problems. Google OAuth API is used for authentication and only college email IDs are allowed to access the community website. The project also uses Stripe API for debit and credit card payments and a QR code is provided for UPI payments. The project is developed using HTML, JS, 3JS, PHP, CSS, MySQL, and XAMPP. The project's purpose is to foster a stronger sense of community within the college, increase engagement between students and administration, and facilitate more efficient fundraising and resource allocation.

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Contents

1 INTRODUCTION

Donation sites are online platforms that enable individuals or organizations to raise funds from a large number of people over the internet. These sites have become increasingly popular as they allow fundraisers to reach a wider audience, and donors to contribute to a cause they care about from the comfort of their own homes. The Donation and Community website is a web-based project aimed at providing a platform for alumni, current students, and well-wishers to donate money to a college and to establish a community for the students. The project consists of two main components: a donation website and a community website. The donation website is used to collect money through various payment methods such as UPI, net banking, cheques, and credit/debit cards via the Stripe API. The community website, on the other hand, provides a platform for students to post suggestions, problems, requests, and thoughts, with the most popular comments displayed at the top. Additionally, this website also displays comments whose like count is above 1000 to reach administration easily. The authentication of the community site is done via Google OAuth API, which allows only college mail ids to access the community site. The project is developed using HTML, CSS, JavaScript, PHP, MySQL, XAMPP, and 3.js, and a 3D model was created using Blender. The aim of this project is to provide a convenient and efficient platform for donations to the college, and to establish a community for the students to share their thoughts and problems with administration. By doing so, this project helps to create a better relationship between the students and administration, making it easier for the administration to address the students' problems and concerns. The Donation and Community website is a project that benefits the college and the students, making it an important contribution to the college community.

2 LITERATURE REVIEW

The concept of a donation website and a community website is not new and has been explored by various organizations and institutions in recent years. Many educational institutions have adopted donation websites to raise funds for various causes such as student scholarships, infrastructure development, and research activities. Community websites have also been developed to provide a platform for students to share their thoughts, ideas, and concerns with their peers and administration. In a study by Zhang et al. (2019), the effectiveness of donation websites for educational institutions was analyzed. The study found that donation websites were effective in raising funds for various causes and were particularly useful in engaging alumni and other potential donors. Similarly, community websites have been found to improve communication and collaboration among students, and between students and administration, as reported by a study by Zhang and Gao (2021). The use of APIs for online payment systems and authentication mechanisms has become increasingly common in web development. Stripe API, which has been used in this project for payment processing, is a widely used payment gateway API that provides secure and reliable payment processing services. Similarly, Google OAuth API, which has been used for authentication in the community website, is a popular authentication API that is used to verify user identity and authorize access to various resources. Overall, the literature suggests that the use of donation and community websites can be effective in engaging stakeholders, raising funds, and improving communication and collaboration within educational institutions. The use of APIs for payment processing and authentication mechanisms has become essential for secure and reliable web development.

2.0.1 PROBLEM AND PURPOSE

The problem that this project aims to solve is to provide a platform for college alumni, current students, and well-wishers to donate money towards the betterment of the college. Additionally, it aims to provide a platform for students to voice their thoughts, problems, and suggestions to the administration easily. The purpose of this project is to create a donation website and a community website for the college that can facilitate the collection of donations and provide a platform for students to voice their opinions. Through the donation website, the college can collect funds for various purposes, such as student welfare and infrastructure development. The community website allows students to post comments and suggestions and interact with their peers and the college administration. Overall, the purpose of this project is to improve the college's infrastructure and provide a better experience for the students.

2.1 BENEFITS OF DONATION AND COMMUNITY WEBSITE

1. Provides a platform for alumni and well-wishers to donate money to the college through various payment methods.
2. Facilitates student welfare by allowing donors to select whether the money donated should be used for student or administration purposes.

3. Offers an easy-to-use and interactive community website that allows students to post suggestions, problems, requests

and thoughts, which helps them connect with the college administration. 4. The website can help identify student issues and address them promptly, leading to a better college experience for the students.
5. The use of secure payment methods such as Stripe API ensures safe and secure online transactions, providing donors with peace of mind.
6. The use of Google OAuth API for authentication ensures only college mail IDs can access the community website, ensuring privacy and security.
7. The project uses modern web technologies like HTML, JS, 3JS, PHP, CSS, MySQL, and XAMPP, which enhances the skills of the developer and makes the project more robust.
8. The inclusion of a QR code for UPI payments makes the donation process more accessible and convenient for donors.
Overall, your project has the potential to make a significant impact on the college community by providing an online platform for donations and promoting communication between students and administration.

2.2 DRAWBACKS OF DONATION AND COMMUNITY WEBSITE

While your project has several potential benefits, there are also some potential drawbacks to consider. One possible drawback is that some donors may be hesitant to donate money online due to security concerns. To address this, it may be necessary to ensure that the website is secure and trustworthy, and to provide clear and transparent information about how the donations will be used. Another potential drawback is that the community platform may require ongoing moderation and management to ensure that posts are appropriate and respectful. Without proper management, there is a risk that the platform could become a forum for negativity or inappropriate behavior. Finally, it may be difficult to generate sufficient interest and engagement in the community platform, particularly if students are not already accustomed to using similar platforms. To overcome this, it may be necessary to develop effective marketing and promotion strategies to encourage students to use the platform and engage with each other.

2.3 FUTURE DIRECTIONS

1. Integration with social media: You could consider integrating your project with social media platforms to increase its visibility and reach. This will help to attract more donors.
2. Mobile application development: With the increasing use of mobile devices, you could consider developing a mobile application for your project. This will help to make it more accessible and user-friendly, and allow users to donate and participate in the community from anywhere.

3 REQUIREMENTS AND SPECIFICATION

3.1 SOFTWARE REQUIREMENTS

1. VS Code: A free source-code editor developed by Microsoft.
2. Blender: A free and open-source 3D creation software tool.
3. XAMPP: A free and open-source cross-platform web server solution stack that includes Apache HTTP Server, MariaDB database, and PHP programming language.
4. Stripe API: A payment processing platform that enables businesses to accept payments online.
5. Google OAuth API: A user authentication mechanism that allows users to log in to third-party websites using their Google account.
6. HTML, CSS, PHP, and JavaScript: Web development languages used to create the website's frontend and backend.
7. MySQL: An open-source relational database management system used for storing data.

3.2 TECHNICAL SKILLS

1. Web development: knowledge of HTML, CSS, JavaScript, and PHP for creating the website and integrating different features.
2. Payment gateway integration: ability to use APIs like Stripe to integrate payment gateways for secure and smooth transactions.
3. Database management: proficiency in MySQL for creating and managing databases for storing user data, donations, and other relevant information.
4. 3D modeling: proficiency in 3D modeling software like Blender for creating 3D models used in the project.
5. Google OAuth API: knowledge of how to integrate Google OAuth API for authentication to ensure only college email IDs are used for accessing the community website.
6. QR code generation: ability to generate QR codes using libraries like ZXing for easy and secure UPI payments.
7. Web hosting: knowledge of web hosting services like XAMPP for hosting the website and ensuring it is accessible online.
8. Version control: proficiency in version control tools like Git to track changes in code and collaborate with other developers.

4 LANGUAGES USED

4.1 HTML AND CSS

HTML, or Hypertext Markup Language, is a markup language used to create the structure and content of web pages. It is the standard language for web development and works in conjunction with CSS and JavaScript to create dynamic and interactive web pages.

HTML uses a series of tags to define the structure and content of a web page. These tags allow developers to specify elements such as headings, paragraphs, images, links, and forms. HTML tags are enclosed in angle brackets, and most have an opening tag and a closing tag.

CSS, or Cascading Style Sheets, is a style sheet language used to describe the presentation and styling of HTML documents. CSS is used in conjunction with HTML to create visually appealing and responsive web pages.

CSS works by defining styles for specific HTML elements or groups of elements. These styles can include properties such as font size, color, background color, and positioning.

4.2 THREE.JS AND JS AND PHP

JavaScript is a programming language that is primarily used for creating interactive web pages and dynamic user interfaces. It is a client-side scripting language that can be used to add functionality to HTML and CSS web pages. With JavaScript, developers can create responsive and interactive web applications that can be run on both desktop and mobile devices.

Three.js is a JavaScript library used for creating 3D graphics on the web. It provides a set of tools and features for creating and manipulating 3D objects, scenes, and animations. With Three.js, developers can create 3D models, add textures and lighting, and create complex animations and interactions. It is built on top of WebGL, which allows for hardware-accelerated rendering of 3D graphics in a web browser.

PHP is used to build dynamic web pages and applications by embedding code directly into HTML. It is an open-source language, meaning that it is freely available and can be used on virtually any platform or operating system.

PHP has a wide range of features that make it ideal for web development. It includes built-in support for interacting with databases, sending emails, and processing user input.

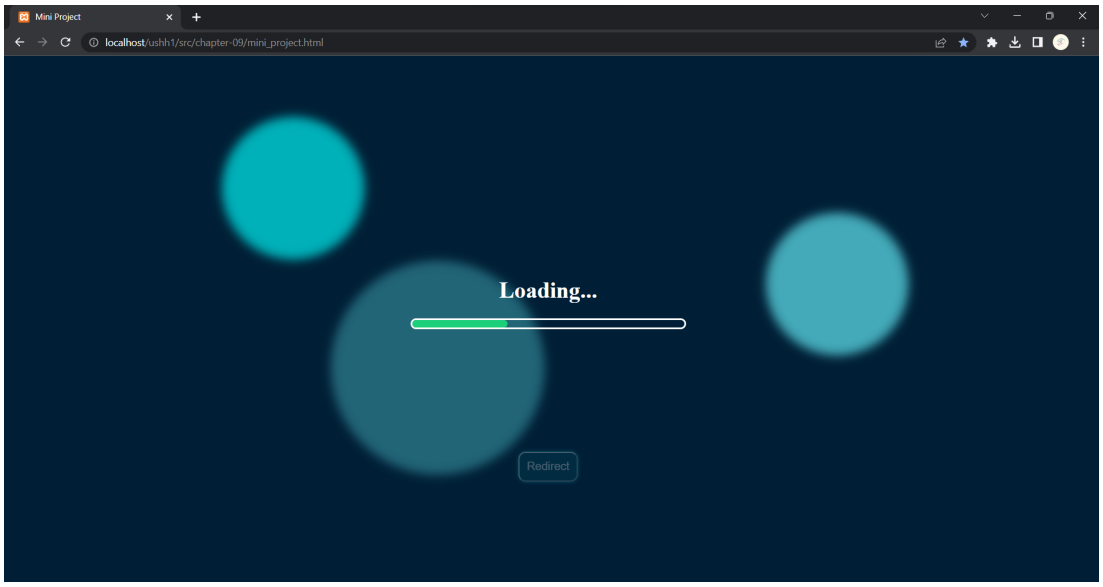
5 OVERVIEW OF THE PROJECT

The project donation and community website for NIT ANDHRA PRADESH consists of two parts, the donation website and the community website, each with its own unique functionality. The donation website allows users to donate money to the college through various payment methods such as UPI, net banking, cheques, and debit/credit cards via Stripe API. The donors can fill a form specifying their name, details, and amount donated, and can choose whether the money will be used for students or administration. The administration can use this money for student welfare. The community website allows students to post suggestions, problems, requests, and thoughts, which appear as comments visible to all other students. The comments are ordered by the number of likes, and each comment has a like button that can be clicked only once per user. A separate website displays comments that have received more than 1000 likes, providing a platform for students to reach the administration and communicate their thoughts, problems, and suggestions. The project has been developed using HTML, CSS, JavaScript,THREE.JS, PHP, and MySQL, with XAMPP as the web server software. The Google OAuth API has been used for authentication. Overall, the project aims to encourage donations to the college and create a platform for students to communicate their thoughts and concerns to the administration easily.

6 FRONT END PAGES

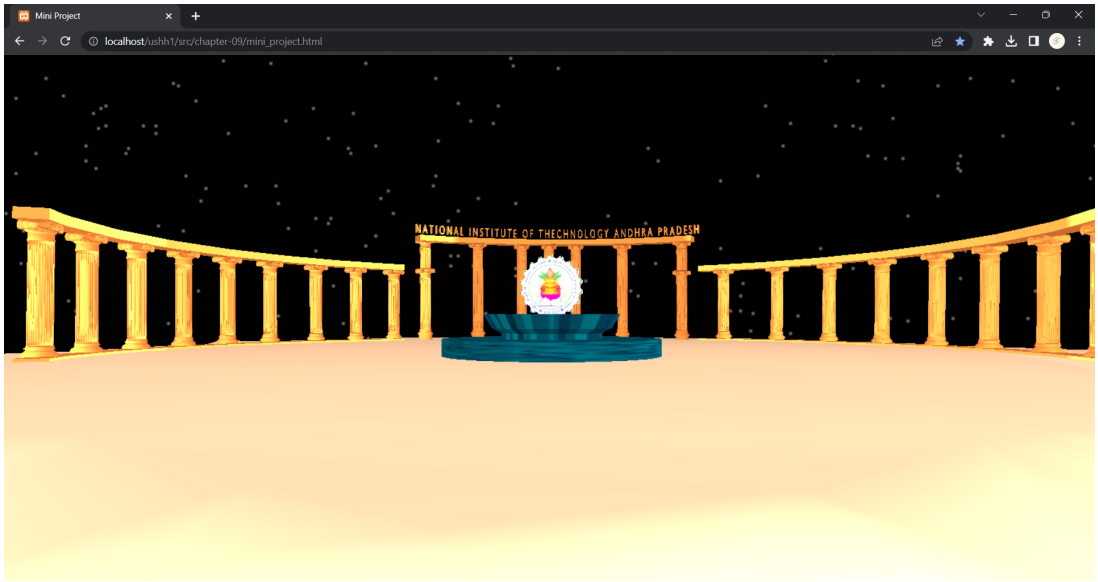
For the front end, we used HTML, CSS, and THREE.js.IN our project primarily consists of loading page,opening page,main page,donation pages,community pages.

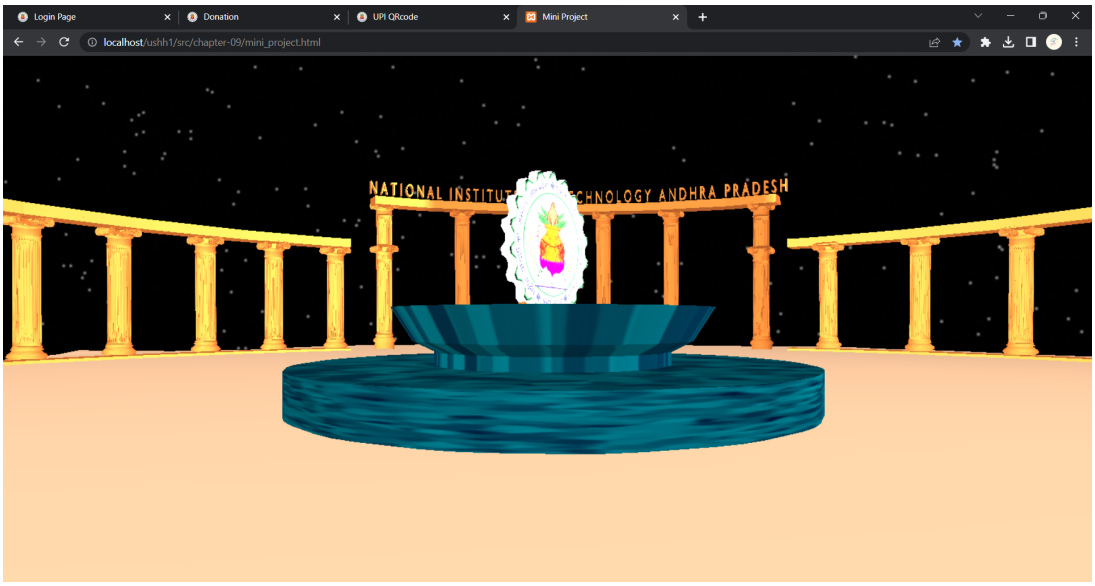
6.1 LOADING PAGE

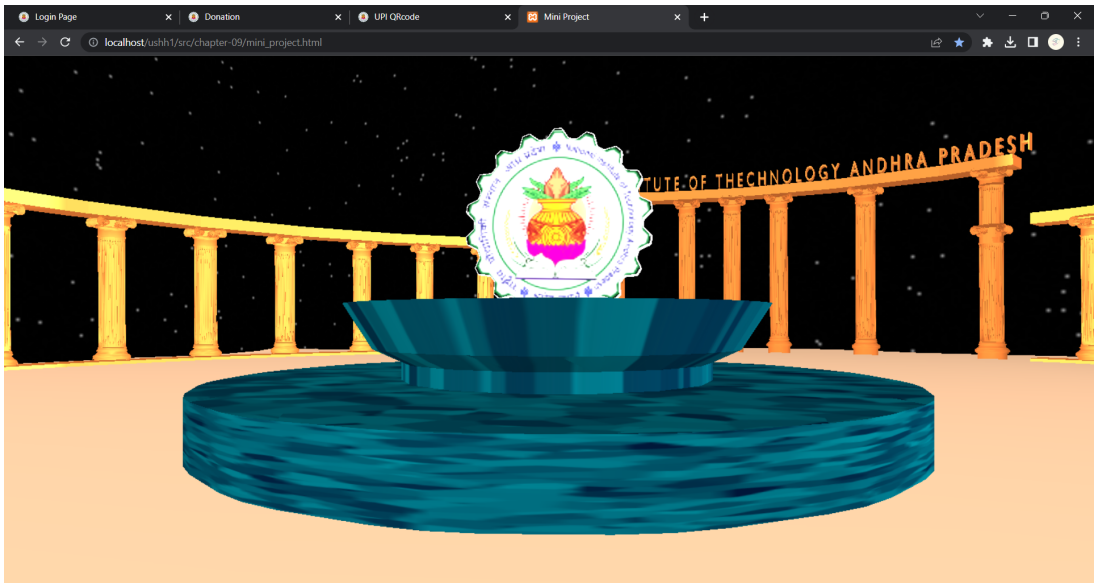


It shows the progress of loading of 3dmodel, and it also contains a redirect button to redirect to the main page if loading of the model takes time.

6.2 OPENING PAGE

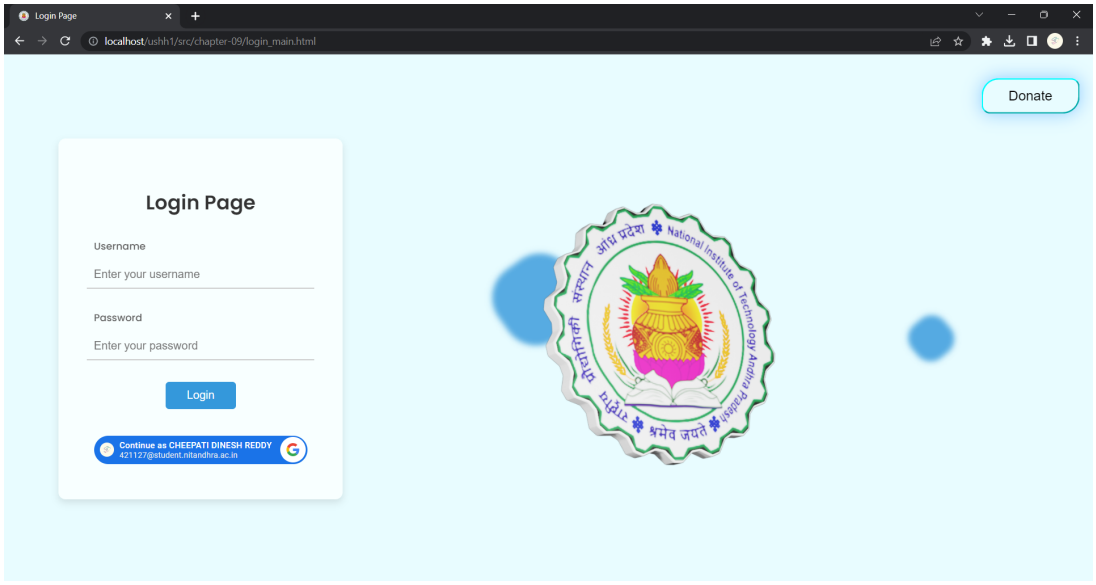


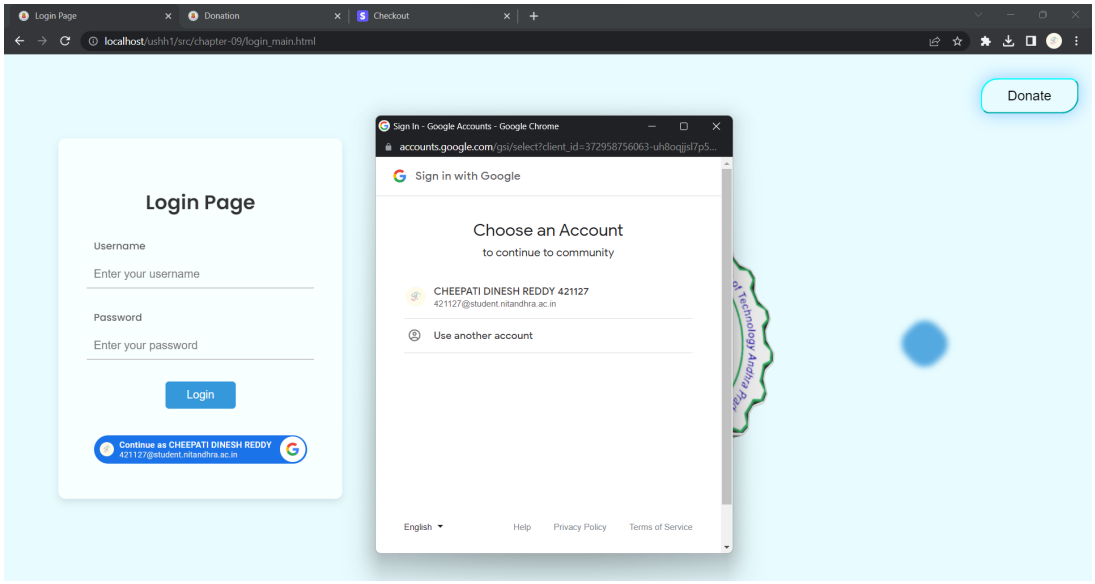




It is a 3d website, we used three.js to build this website. clicking on the institution logo will redirect to the main page. we used a blender to make a 3d model and used 3js to interact with the model. our 3d model is an optimized version which uses less data.

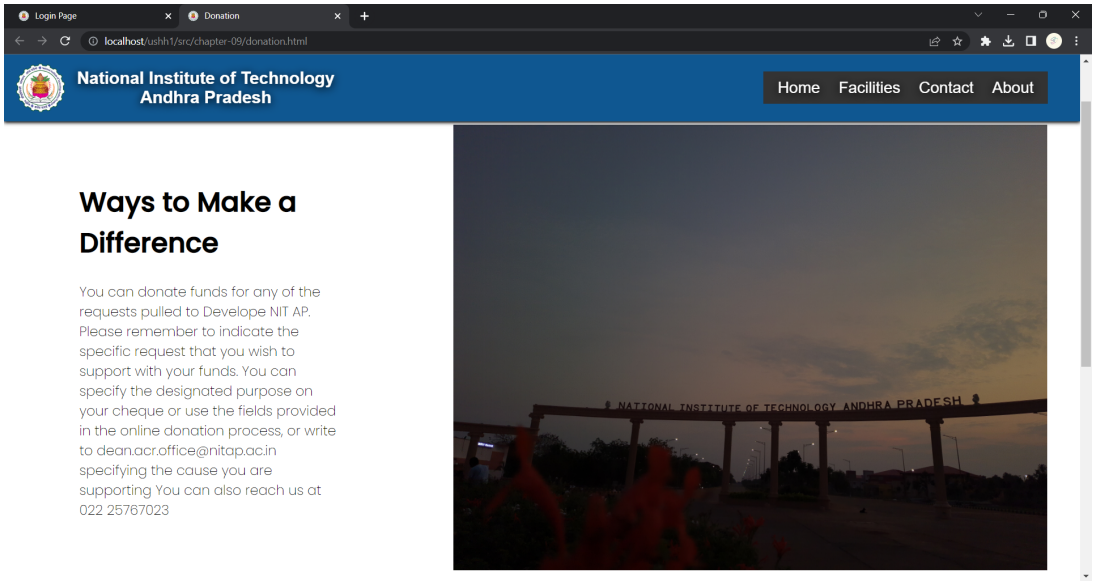
6.3 MAIN PAGE

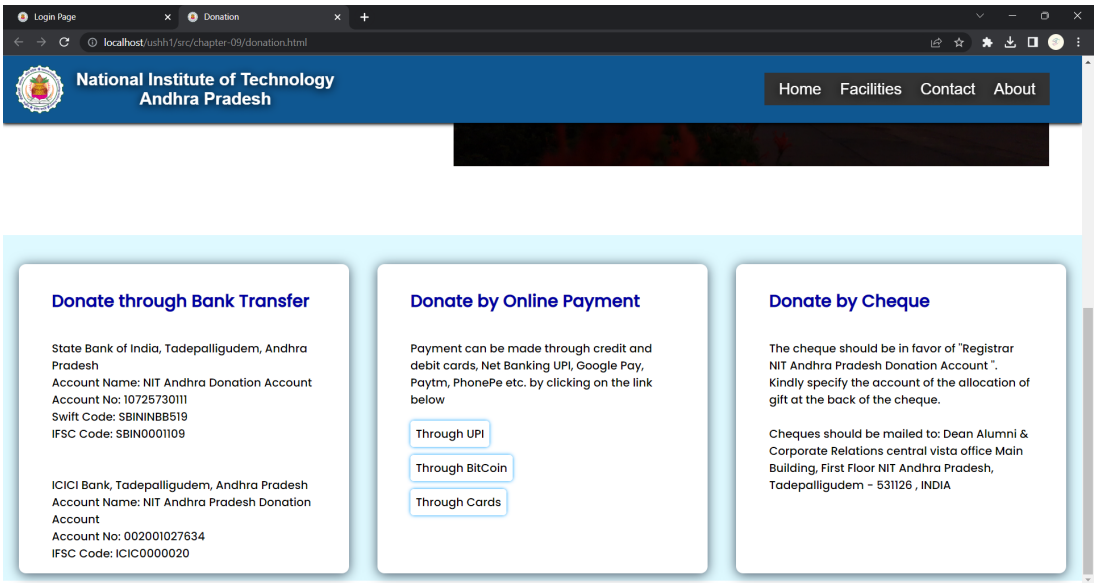




From the main page, we can redirect to the donation page and community page. but to enter into the community page we need to log in only with our institute mail id. we used Google oauth api for authentication.

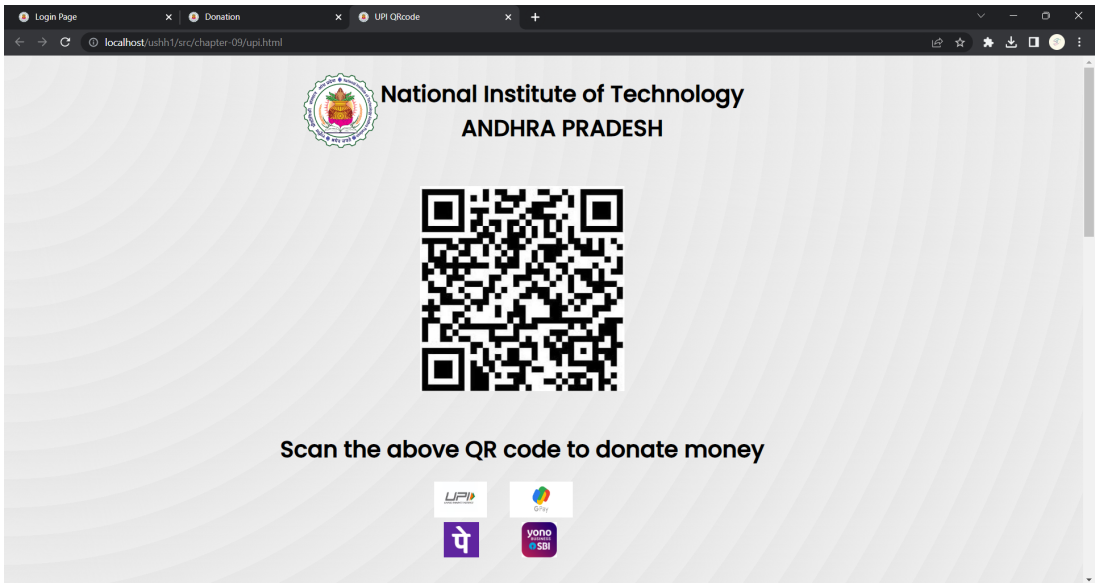
6.4 DONATION HOME PAGE





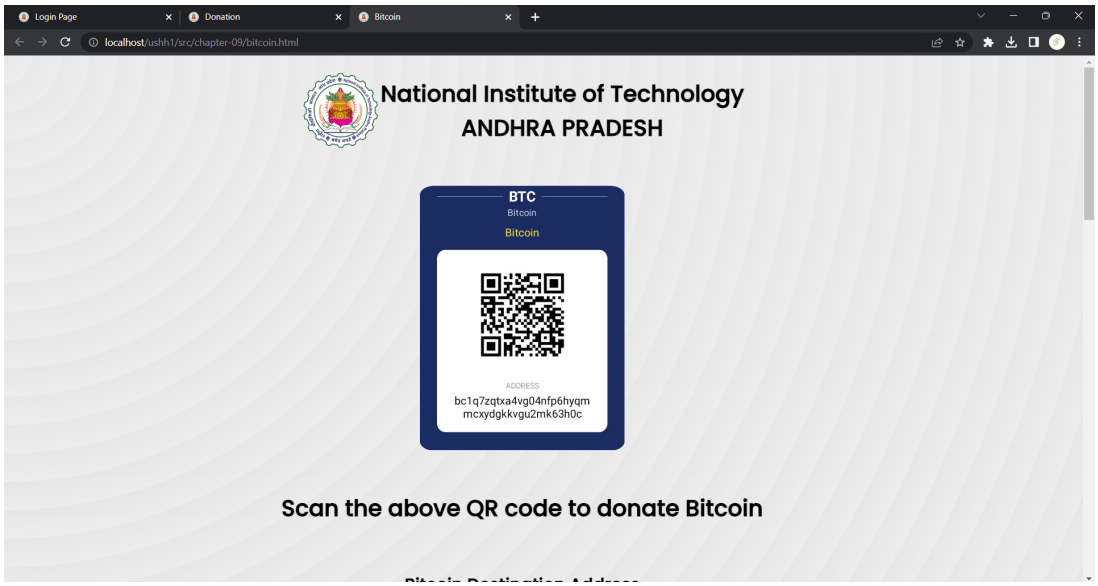
This page provides different modes of payment for donations like UPI, through cards, through Bitcoin, and also contains bank details of our institute for donating through bank transfer.

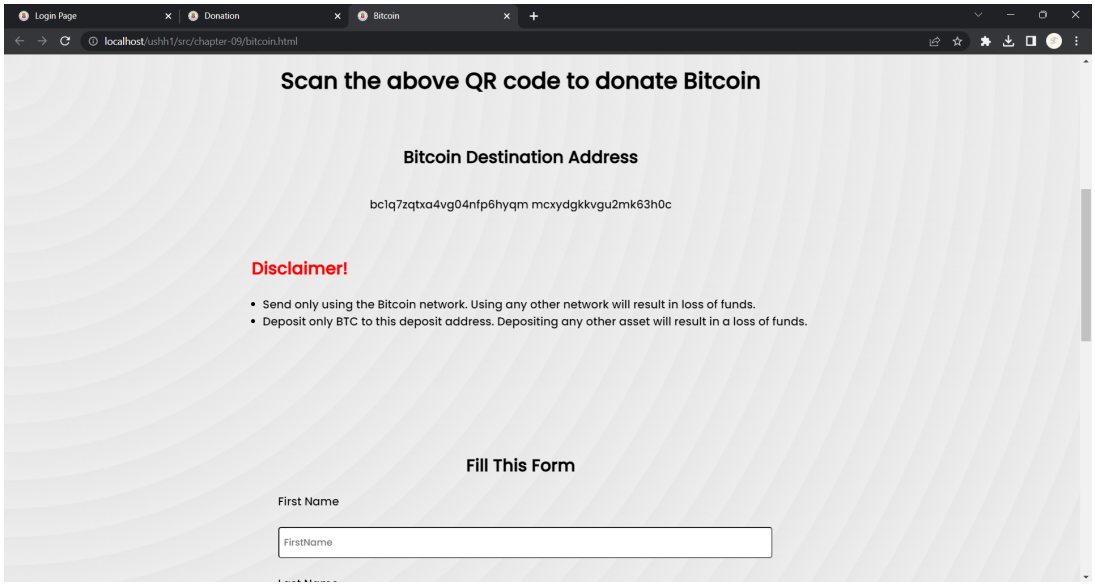
6.4.1 Through UPI



This page provides a QR code. using any UPI app we can donate money.

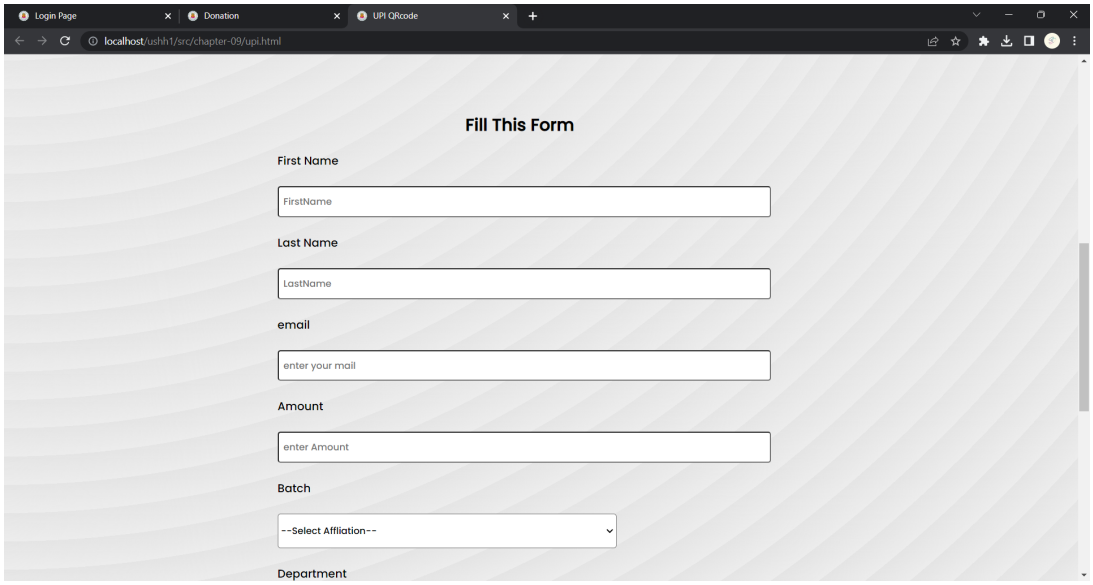
6.4.2 Using Bitcoin

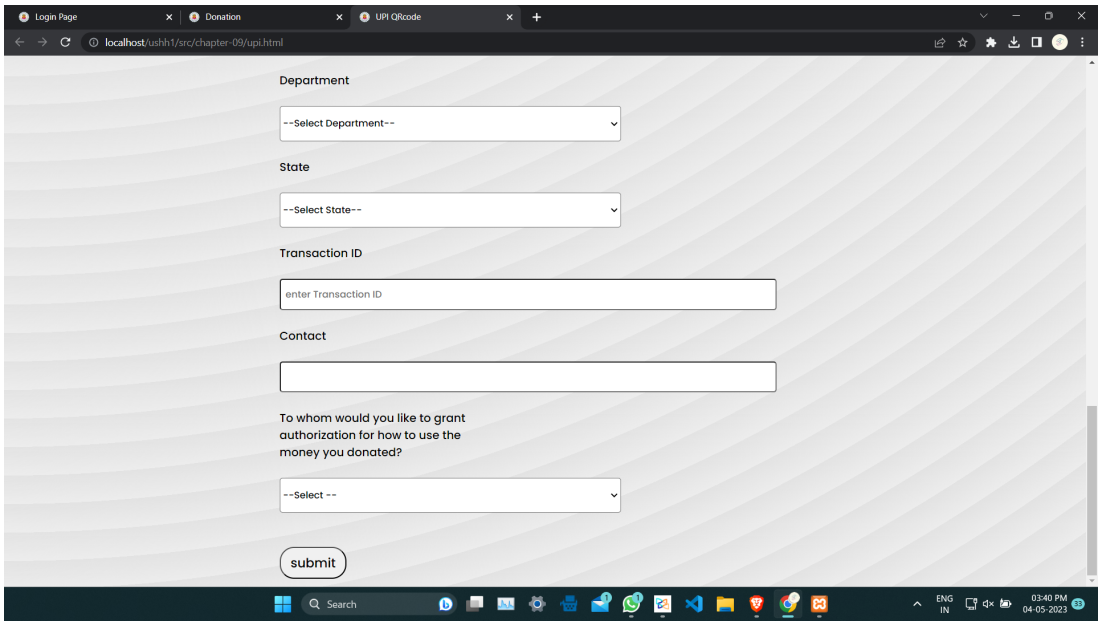




This page provides a QR code for getting the destination address or we provided it directly on the website. we can send bitcoin as donations using the QR code provided on the page.

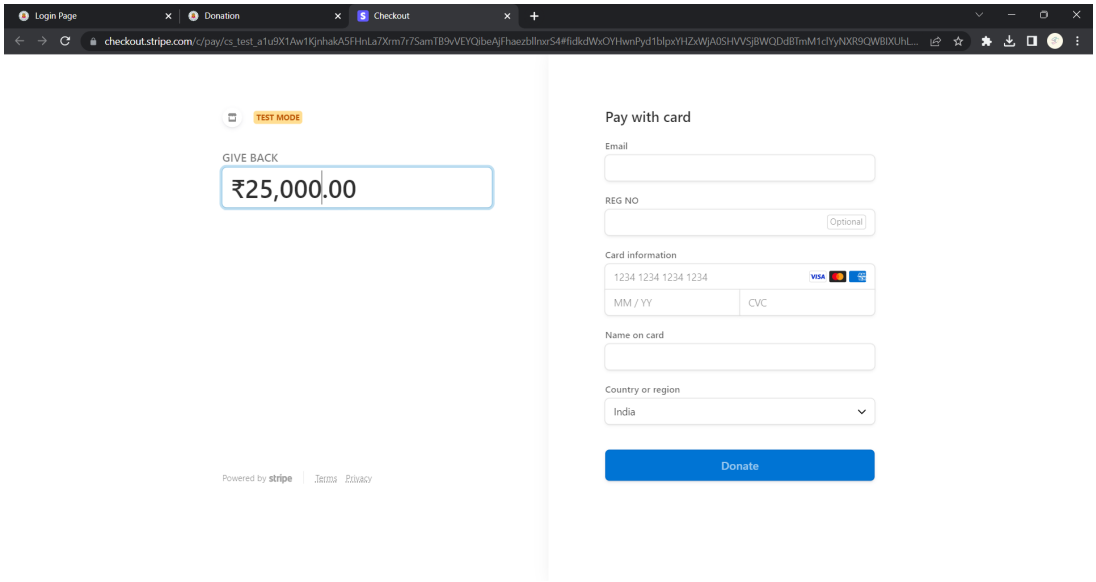
6.4.3 FORM





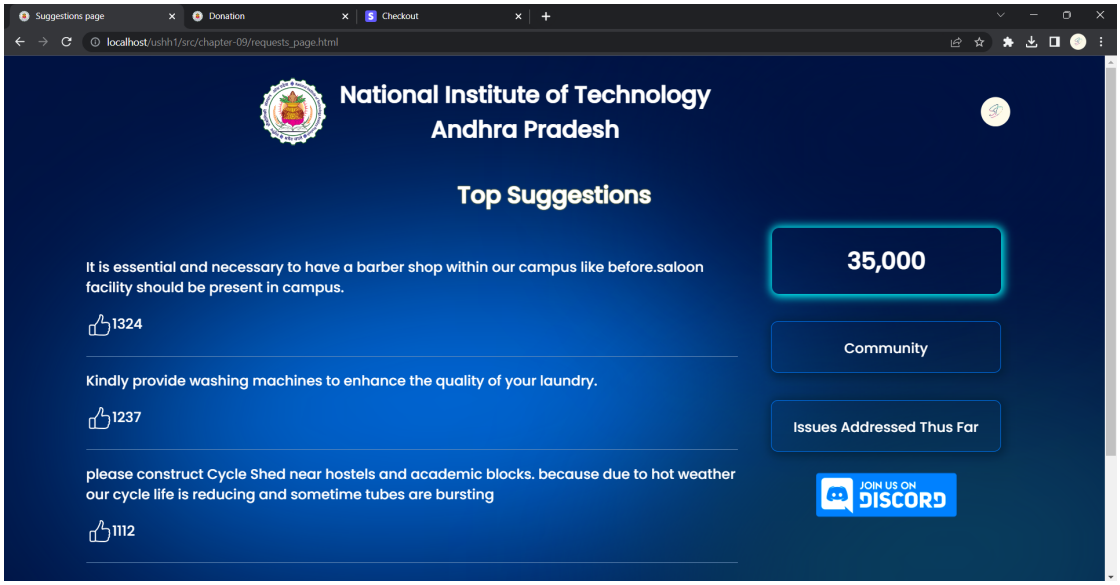
After donating, the donor has to fill out the form which takes basic details and batch, department. at last, the donor has to select to whom the would donor like to grant authorization for how to use the money. if the donor selected students then it will be visible on the community page.

6.4.4 PAYMENT THROUGH CARDS USING STRIPE API



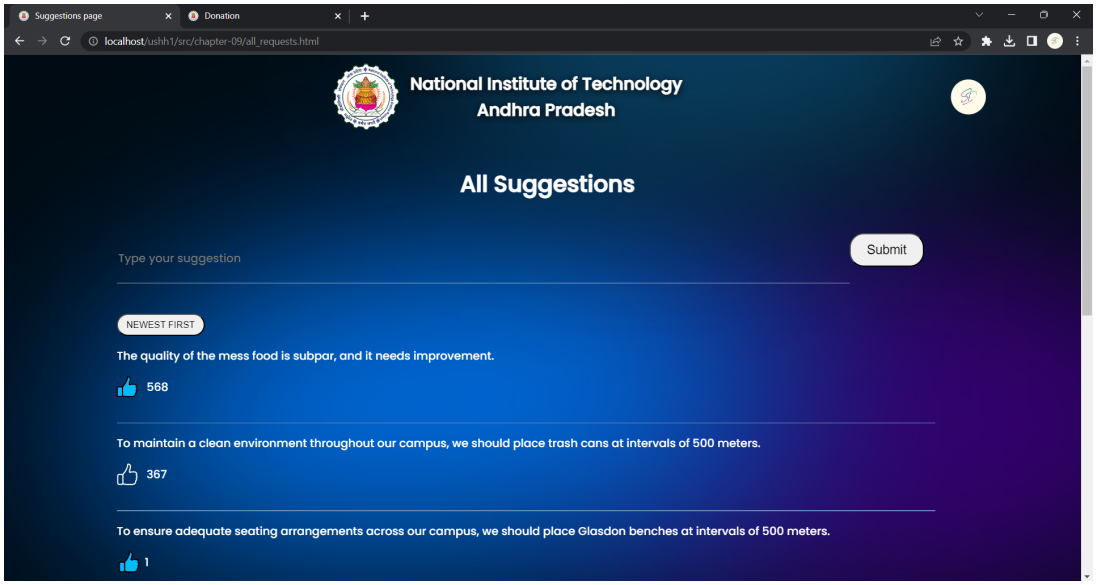
We used strip API, for accepting donations from debit and credit cards.

6.5 COMMUNITY HOME PAGE



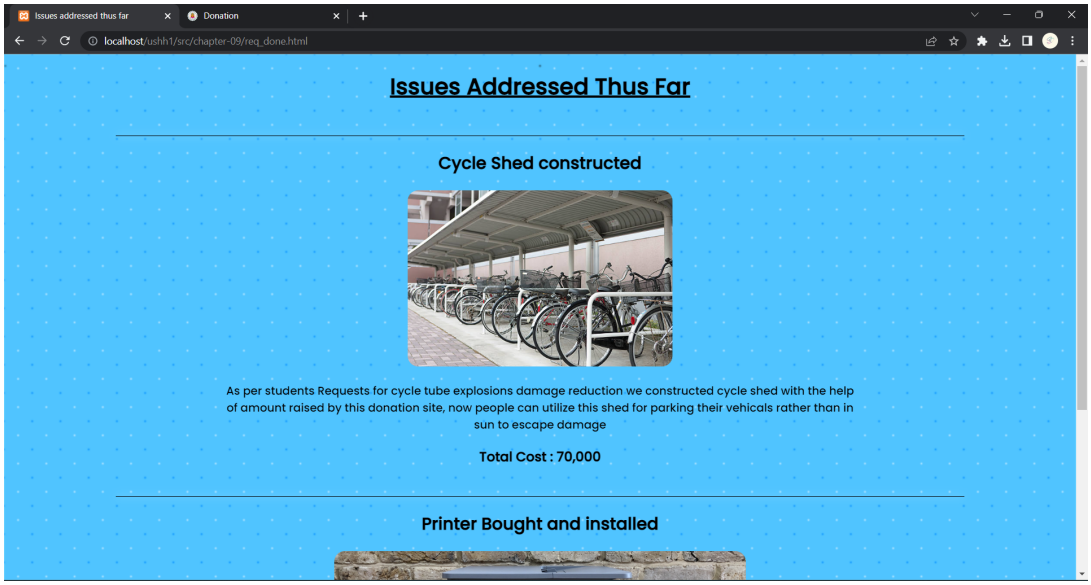
This page contains comments which got likes more than 1000 and the total amount of money received through donors who selected students is displayed. From this page, we can redirect to the community page where we can post our problems also redirect to Issues addressed thus Far Page.

6.5.1 ALL SUGGESTIONS PAGE



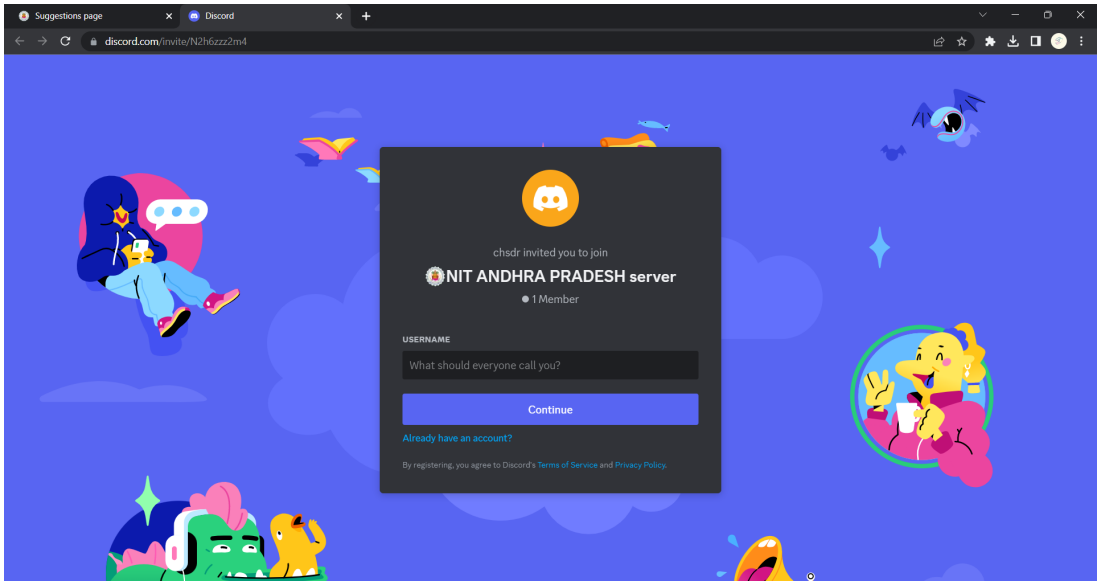
This page provides a platform for students can post comments and voice their opinions.

6.5.2 ISSUES ADDRESSED THUS FAR PAGE



This page contains how money is spent on solving students' problems.

6.5.3 DISCORD SERVER FOR OUR COLLEGE



Discord is an excellent communication platform for college student communities, offering many advantages over WhatsApp. Discord's voice chat quality is superior to that of WhatsApp, which makes it easier for students to communicate and collaborate on group projects, assignments, and extracurricular activities. Additionally, Discord allows users to create multiple channels, making it easier to manage conversations for different classes, clubs, and interest groups. Discord's role-based permission settings provide greater control and organization of conversations, making it easier for student leaders to manage group discussions and events. Furthermore, Discord's customizable profile and server options allow student communities to create a unique identity and brand for their group, promoting a sense of belonging and community.

7 FUTURE SCOPE AND CONCLUSION

Future scope:

1. Expanding the functionality of the donation site beyond collecting funds for student welfare to also include collecting donations for faculty research is a potential area for further development. This would enable the site to serve as a platform for supporting a broader range of academic initiatives, benefiting both students and faculty members. In addition to contributing to student welfare, donors would also have the opportunity to support important research projects led by faculty members, promoting a culture of innovation and academic excellence. By broadening the scope of the donation site, the university could attract a wider range of donors who are passionate about advancing education and research in their respective fields.
2. The community website can be enhanced to include features such as private messaging and forums for specific topics.
3. The donation website can be integrated with social media platforms to increase outreach and enable more people to donate easily.
4. The community website can be integrated with the college's official website to provide a unified platform for students to access all college-related information.

Conclusion:

The project provides a platform for college alumni, current students, and well-wishers to donate money towards the betterment of the college. Additionally, it provides a platform for students to voice their thoughts, problems, and suggestions to the administration easily. Through the donation website, the college can collect funds for various purposes, such as student welfare and infrastructure development. The community website allows students to interact with their peers and the college administration and voice their opinions. Overall, the project aims to improve the college's infrastructure and provide a better experience for the students. The project has the potential for further development and expansion in the future to include more features and provide a more comprehensive platform for college-related activities.

8 RESULTS AND DISCUSSIONS

Results:
After the implementation and testing of your project,we achieved the following results:

A fully functional website that allows present students, alumini , well wishers to donate money through mulitple ways like direct money transfer through bank details, or check transfer, or through UPI, through Bitcoin, through Stripe API(Credit/Debit cards).
Increased Community Engagement: The website facilitates communication among students within a college community, promoting community engagement and social interaction.
A user-friendly interface and with 3d interface it makes our website unique.
Secure Login Page: The implementation of a secure login page with robust authentication and error handling ensures that the website is secure and prevents unauthorized access in which google authentication is used.
Prioritizes the students basic needs with the help of community and transperancy for how money is used is maintained

Discussion:
A fully functional website that allows for donations through multiple payment methods. Having these options available will make it easier for donors to contribute in a way that suits them best, and will increase the likelihood of receiving donations. Additionally, prioritizing the students' basic needs with the help of the community is an excellent way to ensure that the website is meeting its intended purpose.
By allowing for better communication among students within the college community, your website can promote social interaction and help to foster a sense of community. This can be especially important for students who may feel isolated or disconnected from their peers.
The user-friendly interface and 3D design are also noteworthy achievements, as they make your website stand out and provide an enjoyable user experience.
The user-friendly interface and 3D design are also noteworthy achievements, as they make your website stand out and provide an enjoyable user experience
Finally, maintaining transparency on how donated funds are used is crucial for building trust with donors. By ensuring that donors can see how their contributions are being used, you are demonstrating your commitment to accountability and transparency, which can help to build a positive reputation for your website and increase donor confidence.

9 REFERENCES

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3. https://www.w3schools.com:From this Website, I have gained an basic knowledge of HTML, CSS, JavaScript,php
4. https://www.cengage.ca/c/new-perspectives-on-html-5-and-css-comprehensive-comprehensive-44-8th-edition-8e-carey/9780357107140/From this Book New Perspectives on HTML 5 and CSS: Comprehensive Comprehensive — 8th Edition, I have gained an in-depth knowledge of HTML, CSS, JavaScript
5. https://larryullman.com/books/php-for-the-web-visual-quickstart-guide-5th-edition/:From this Book, I have gained an in-depth knowledge of php
6. https://www.mheducation.co.in/database-system-concepts-9789390727506-india:From this Book, I have gained an in-depth knowledge of MySQL
7. https://developers.google.com/identity/protocols/oauth2:From this Documentation, I have gained knowledge of how to use google API for authentication and sign-in
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10. https://www.washingtonpost.com/outlook/2022/03/31/bitcoin-donations-cryptocurrency-charities/: From this article i got to an idea to implement Bitcoin for donations purpose as blockchain is future and trending