A

**PROJECT REPORT ON**

# " Developing an E-educational Networking Platform"

SUBMITTED TO SAVITRIBAI PHULE PUNE UNIVERISTY FOR THE PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

**BACHELOR OF ENGINEERING**
**IN**
**ELECTRONICS AND TELECOMMUNICATION**

Submitted by

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Academic Year 2022-2023

# Undertaking

We, the students of Department of Electronics and Telecommunication Engineering, PVG's College of Engineering and Technology & G. K. Pate (Wani) Institute of Management, Parvati, Pune-411009

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**Department of Electronics and Telecommunication Engineering
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# CERTIFICATE

This is to certify that the project entitled, **"FeeDx - Waste Food Donation Application",** has been successfully completed by,

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towards the partial fulfillment of the degree of **Bachelor of Engineering** in **Electronics and Telecommunication** Engineering to be awarded by the **Savitribai Phule Pune University, Pune** at **Pune Vidyarthi Griha's College of Engineering and Technology G. K. Pate(Wani) Institute of Management, Pune** during the academic year 2022-2023.

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# ACKNOWLEDGEMENT

Please acknowledge everybody who were involved and helped you in completing this report/theses/project work directly or indirectly. But keep this brief and resist the temptation of writing flowery prose. Do include all those who helped you, e.g. other faculty / staff you consulted, colleagues who assisted etc. Acknowledge the source of any work that is not your own.

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# Chapter 1

# INTRODUCTION

## Introduction:

In the fast-paced and interconnected world we live in, embracing technology has become crucial in every aspect of our lives, including education. Our e-learning platform harnesses the power of digital tools, connectivity, and innovative pedagogical techniques to create a learning environment that is flexible, accessible, and tailored to your individual needs.

Unlike the traditional platform, our e-learning platform transcends the boundaries of time and geography. With just a few clicks, you can access a vast library of courses and resources from anywhere in the world. Say goodbye to commuting or adhering to rigid schedules; our platform allows you to learn at your own pace, fitting seamlessly into your busy lifestyle.

Furthermore, our e-learning platform fosters a vibrant and connected community of learners. Through virtual classrooms, interactive discussions, and collaborative projects, you can connect with like-minded individuals from around the globe, exchanging ideas, experiences, and perspectives. This collaborative learning environment not only enhances your understanding but also nurtures valuable networking opportunities and lifelong connections.

Lastly, our e-learning platform is constantly evolving with the latest advancements in educational technology. We leverage artificial intelligence, virtual reality, and interactive multimedia to create immersive and engaging learning experiences. By embracing these innovative tools, we strive to make learning exciting, interactive, and unforgettable.

**Motivation:** Emphasize the flexibility and convenience that e-learning offers. Learners can access courses anytime, anywhere, and learn at their own pace. This freedom allows them to fit education into their busy schedules and balance other commitments while pursuing their learning goals. E-learning platforms often provide discussion forums, virtual classrooms, and collaborative projects that facilitate interaction and knowledge sharing.

**Formal Education:** E-learning platforms are extensively used in formal education settings, such as schools, colleges, and universities. They provide online courses, virtual classrooms, and learning management systems to supplement or replace traditional classroom instruction. These platforms offer flexibility, accessibility, and a diverse range of resources to support academic learning.

**Corporate Training:** E-learning platforms are widely adopted in corporate settings for employee training and development. They offer on-demand training modules, compliance courses, and skills development programs. E-learning platforms allow organizations to train employees across different locations, track progress, and customize training based on individual needs.

**Professional Development:** E-learning platforms provide opportunities for professionals to enhance their skills and knowledge. They offer courses, certifications, and resources in various fields, such as business, technology, healthcare, and creative industries. Professionals can use these platforms to acquire new skills, stay updated with industry trends, and improve their career prospects.

**Continuing Education:** E-learning platforms support lifelong learning and continuing education. They enable individuals to pursue personal interests, hobbies, or explore new subjects beyond formal education. These platforms offer a wide range of courses and resources that cater to diverse learning needs and interests.

**Skills Training and Certification:** E-learning platforms are often used for skills training and certification programs. They provide interactive modules, simulations, and assessments to help learners acquire specific skills or qualifications. These platforms are particularly valuable in industries such as IT, healthcare, and finance, where certifications play a crucial role in career advancement.

**Language Learning:** E-learning platforms offer language courses and interactive tools to facilitate language learning. Learners can access multimedia content, practice exercises, and engage in virtual conversations to improve their language proficiency. These platforms often incorporate speech recognition and feedback systems to enhance the learning experience.

**Personal Development and Enrichment:** E-learning platforms are utilized for personal growth and enrichment. They offer courses and resources on a wide range of topics, including personal finance, wellness, arts, and self-improvement. Learners can explore their interests, acquire new knowledge, and develop valuable skills through these platforms.

**Remote and Distance Learning:** E-learning platforms play a crucial role in remote and distance learning scenarios. They enable students to access educational content, interact with instructors, and complete assignments remotely. These platforms have gained significant importance during periods of lockdowns, travel restrictions, or when traditional classroom attendance is challenging.

## Objectives:

- provide accessible education to a wide range of learners. It should break down barriers of time, location, and physical limitations, allowing learners to access educational resources and courses conveniently from anywhere at any time.
- provide learners with the flexibility to choose courses and resources that align with their interests, skill levels, and learning preferences. Personalization enhances engagement, motivation, and the overall effectiveness of the learning process.
- The platform should allow learners to access materials, progress through courses, and complete assignments at their own pace and convenience. This objective ensures that learning becomes adaptable to individual needs and circumstances.
- Design and develop a platform that can accommodate a large number of learners simultaneously. Ensure the system can handle increased traffic and user demands without compromising performance or accessibility.

## Expected Outcomes:
- To provide learners with opportunities for enhanced learning experiences. This can include access to a wider range of courses and subjects, interactive content, multimedia resources, and personalized learning paths.
- Break down barriers to education by providing access to learning opportunities anytime, anywhere.
- Increased access to education for learners who may have geographical, time, or physical constraints.
- Platforms often employ various interactive and multimedia elements to engage learners and improve information retention.
- platforms can offer continuous assessment and feedback mechanisms to track learner progress and provide timely feedback on assignments.

## Social relevance of the project:

E-educational learning platforms have significant social relevance and can contribute to various aspects of society. Here are some key social benefits and relevance of e-learning platforms:

- **Increased Access to Education**: E-learning platforms remove geographical barriers, making education accessible to learners who may not have access to traditional educational institutions. This is particularly beneficial for individuals in remote areas, underserved communities, or regions with limited educational resources.

- **Lifelong Learning Opportunities:** E-learning platforms provide opportunities for lifelong learning, allowing individuals to acquire new knowledge, skills, and competencies throughout their lives. This is crucial in today's rapidly evolving world, where continuous learning is essential for personal growth, career development, and adapting to changing industries and technologies.

- **Economic Empowerment:** By providing education and skill development opportunities, e-learning platforms contribute to economic empowerment. Learners can acquire valuable skills and knowledge that enhance their employability, career prospects, and income potential. This, in turn, helps individuals and communities improve their socioeconomic status and reduce inequalities.

- **Inclusive Education:** E-learning platforms can accommodate diverse learning needs and cater to learners with disabilities or special requirements. They provide flexibility in terms of learning pace, multimedia content, and adaptive learning features. By offering inclusive educational experiences, e-learning platforms promote equal opportunities for individuals with diverse backgrounds and abilities.

- **Environment Sustainability:** E-learning platforms contribute to environmental sustainability by reducing the need for physical infrastructure and resources associated with traditional education. They minimize commuting and paper usage, resulting in lower carbon footprints. By embracing digital learning, e-educational platforms support sustainable practices and environmental conservation efforts.

- **Community Development:** E-learning platforms can support community development initiatives by offering localized content, language options, and courses that address specific community needs. They empower individuals within communities to acquire knowledge

and skills that can contribute to local development, entrepreneurship, and social progress.

**Organization of the report**

# Chapter 2

# LITERATURE SURVEY

## 2.1 Introduction:

The literature may provide insights into the effectiveness of e-learning platforms in terms of learning outcomes, knowledge retention, and skills development. Findings may highlight the advantages of e-learning compared to traditional classroom-based learning or explore factors that contribute to successful e-learning experiences.

The survey may address the importance of inclusivity and accessibility in e-learning platforms. Findings may discuss strategies for designing accessible e-learning environments for learners with disabilities, ensuring compliance with accessibility standards, and providing support for diverse learner populations.

**"Knowledge Sharing Mechanism in Social Networking for Learning" (2017):** Social media based learning resources are powerful tools for enhancing teaching and research activities in the university education system. This paper focuses on the development of a prototype web based learning resource with the purpose for users to exchange project software development knowledge. This study explores the efficiency of social networking systems as instructional tools in the computer science program at Suan Sunandha Rajabhat University. A database containing information from 1,497 subjects was developed and linked in the Computer-Project-Community site.

**"Collaboration of Knowledge Network and E-learning system with social sites for teaching learning" (2014):** As the world is changing, the new technologies are getting born to interact with the current environment. Most of the students today have a social presence over the social networking sites. The student use these social sites to chat and keep their information updated. The usage of social networking sites among the teaching family has become common, the teachers in the colleges and universities can use these social networking tools for imparting knowledge to their students

**"Assessments and Evaluation in E-Learning"(2012):** In this paper comparison of traditional assessment and e-assessment is carried out. The respective effectiveness of each method e-assessment and e-learning for the learner based on learner profiles and learning desired

learning outcome is done in the paper.                    .

**" Designing Online Learning to be Accessible to Students with Disabilities"(2021)**

This paper shares the design and results of an exploratory study that focused on improving the accessibility of online tools and pedagogy. It tells how a universal design framework can be used by instructors and researchers interested in ensuring that online learning is accessible to and inclusive of all students, including those with disabilities.                                    .

# Chapter 3

# Design of the System

## 3.1 Introduction:

An e-educational networking platform is a digital environment designed to facilitate learning, collaboration, and networking among students, educators, and other participants in the field of education. It leverages technology to provide a range of educational resources, tools, and interactive features to enhance the learning experience. Here is an introduction to an e-educational networking platform:

e-educational networking platform dedicated to transforming the way education is delivered and experienced. Our platform creates a virtual space where students, teachers, and education enthusiasts can connect, engage, and collaborate seamlessly.

Our networking features connect learners with educators and mentors who provide guidance, support, and valuable insights. Through private messaging and mentorship programs, students can receive personalized assistance and mentorship from experts in their fields of interest. This networking aspect empowers learners to grow their professional networks and gain real-world insights from industry professionals

prioritize the security and privacy of our users' data. Our platform ensures the confidentiality of personal information and employs robust security measures to safeguard user accounts and interactions.

## 3.2 Block Diagram of the proposed system:

**Figure 3.2 Block diagram of the proposed system**
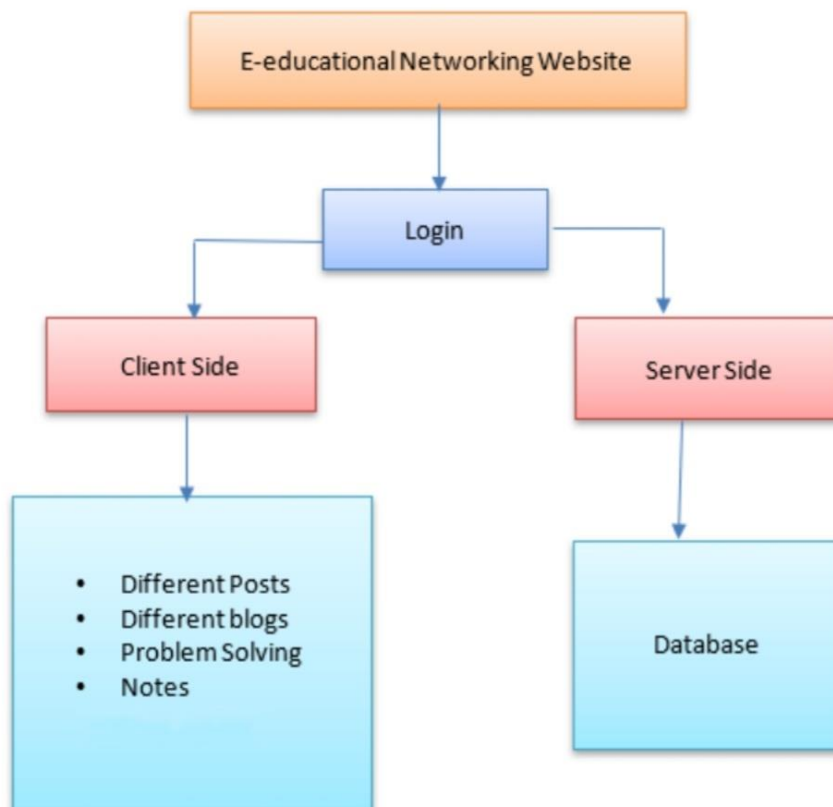
**3.2.1 Explanation of block diagram -**

**Login Page**: A login page, also known as a sign-in page, is a web page or interface that allows users to authenticate themselves and gain access to a restricted system, website, or application. It typically consists of a form where users can enter their credentials, such as a username or email address and password, to verify their identity.

**Client Side**: the client side refers to the part of the web application that runs on the user's device, typically a web browser. It encompasses the code, scripts, and resources that are downloaded from the server and executed on the client's machine to render and interact with the web page.

**Server Side**:  In website development, the server side refers to the part of the application that runs on the server or hosting environment. It handles the processing of requests, data storage, and other server-side operations.

**Database:** A database is a structured collection of data that is organized, stored, and managed in a way that allows for efficient retrieval, manipulation, and analysis. Databases are widely used in various applications and systems, including websites, software applications, and business operations.

**3.2.2 Working of the project**

The working flow of a website typically involves a series of steps that occur when a user interacts with the site. Here's a general overview of the working flow of a website:

1. User Request:
   - The user initiates a request to access a website by entering the website's URL or clicking on a link.
   - The request is sent from the user's web browser to the website's server.

2. Server Processing:
   - The server receives the user's request and processes it.
   - The server may need to handle tasks such as authentication, session management, and routing.

3. Backend Processing:
   - The server communicates with the backend components, such as a web application or an API.
   - The backend performs the necessary processing based on the user's request.
   - This may include accessing databases, performing calculations, retrieving data, or interacting with external services.

4. Data Retrieval:
   - If the backend needs to retrieve data from a database or external source, it makes the necessary queries or requests.
   - The data is fetched and returned to the backend for further processing.

5. Backend Response:
   - The backend prepares a response based on the user's request and the processed data.
   - This response may include HTML, JSON, XML, or other data formats depending on the application's requirements.

6. Frontend Rendering:
   - The server sends the response back to the user's web browser.
   - The browser receives the response and begins rendering the content received.

7. Frontend Presentation:
   - The web browser interprets the HTML, CSS, and JavaScript code received from the server.
   - The browser renders the webpage, displaying the content and applying the defined styles.
   - JavaScript code is executed, providing interactivity and dynamic updates to the webpage.

8. User Interaction:
   - The user interacts with the rendered webpage, such as clicking links, submitting forms, or interacting with interactive elements.
   - The browser captures the user's actions and triggers corresponding events.

9. Frontend Processing:

- JavaScript code in the webpage's frontend handles the user's actions.
- This may involve making AJAX requests to the server, manipulating the webpage's content, or triggering animations and other dynamic behavior.

10. Server Interaction:
- If the user's action requires further server interaction, such as submitting a form or fetching additional data, the frontend JavaScript code initiates an HTTP request to the server.

11. Repeat Steps 2-10:
- The server receives the user's new request and repeats the processing steps, interacting with the backend, retrieving data, and preparing a response.
- The updated response is sent back to the browser, and the updated content is rendered and presented to the user.

This working flow continues as the user navigates through the website, interacts with different pages, and performs various actions. The server and backend components handle the processing and data management, while the frontend provides the user interface and interactivity, creating a seamless experience for the user.

**Frontend -**

The frontend is the user-facing part of a website or web application. It encompasses the HTML, CSS, and JavaScript code that runs in a web browser and determines the visual and interactive aspects of the website. Here's an explanation of how the frontend works:

1. Structure with HTML:
- HTML (Hypertext Markup Language) provides the structure and content of web pages.
- HTML tags define elements such as headings, paragraphs, lists, images, forms, and more.
- The browser renders the HTML markup and displays the content according to the defined structure.

2. Styling with CSS:
- CSS (Cascading Style Sheets) is used to control the presentation and appearance of HTML elements.
- CSS rules define properties like colors, fonts, layout, spacing, and other visual aspects.
- Stylesheets can be external files linked to HTML or embedded within HTML using the `<style>` tag.
- The browser applies the CSS styles to the HTML elements, resulting in the desired visual representation.

3. Interactivity with JavaScript:
- JavaScript is a programming language that enables dynamic and interactive behavior on web pages.
- JavaScript code can be embedded directly within HTML or included as separate script files.
- It allows for event handling, DOM manipulation, form validation, animations, and more.
- JavaScript interacts with the HTML and CSS elements, responding to user actions and

updating the page dynamically.

4. Browser Rendering:
   - When a user visits a webpage, the web browser retrieves the HTML, CSS, and JavaScript files from the server.
   - The browser parses the HTML, constructs the Document Object Model (DOM), and renders the initial structure of the webpage.
   - The CSS is then applied to the HTML elements, modifying their appearance based on the defined styles.
   - JavaScript code is executed, allowing for interactivity and dynamic updates to the DOM and CSS properties.

5. User Interaction:
   - Users interact with the frontend through various actions like clicking buttons, submitting forms, or entering input.
   - Event handlers in JavaScript respond to these actions and trigger corresponding actions or changes on the page.
   - JavaScript code can perform validations, make AJAX requests to the server, update the DOM, and provide a smooth user experience.

6. Communication with the Backend:
   - To retrieve or submit data from/to the server, the frontend communicates with the backend using HTTP requests.
   - JavaScript code can make AJAX requests using the XMLHttpRequest or Fetch API to send requests and receive responses from the server.
   - The backend processes these requests, performs necessary operations (e.g., database queries), and sends back data or confirmation.

7. Responsive Design:
   - With the increasing use of mobile devices, responsive design techniques are employed to ensure websites adapt to different screen sizes.
   - CSS media queries and flexible layout techniques allow the frontend to adjust its presentation based on the user's device, optimizing the user experience.

Overall, the frontend combines HTML, CSS, and JavaScript to create the user interface, control the visual styling, and provide interactivity. It is responsible for rendering web pages in the browser, responding to user actions, and communicating with the backend to deliver a dynamic and engaging user experience.

● **Backend:**

The backend of a website or web application is the behind-the-scenes part that handles the server-side operations, database interactions, and business logic. It powers the functionality, data processing, and communication between the frontend and the server. Here's an explanation of how the backend works:

1. Server Setup: The backend typically runs on a server, which can be a physical server or a cloud-based server provided by a hosting service. The server is responsible for receiving and responding to incoming requests from the frontend or other clients.

2. Server-Side Programming: Backend development involves using server-side programming languages such as JavaScript (Node.js), Python, Ruby, Java, or PHP. These languages are used to write the logic that processes requests, interacts with databases, and generates responses.

3. Handling Requests: When a user interacts with the frontend, such as submitting a form or clicking a button, the frontend sends an HTTP request to the backend server. The server receives this request and processes it based on the specified route and HTTP method (GET, POST, PUT, DELETE, etc.).

4. Business Logic: The backend executes the necessary business logic to fulfill the request. This can include tasks such as data validation, authentication, authorization, data manipulation, calculations, and integration with external services or APIs.

5. Database Interaction: The backend often interacts with a database to store, retrieve, and manipulate data. It connects to the database, executes queries or commands to read or modify data, and returns the results to the server.

6. API Development: Backend development often involves designing and implementing APIs (Application Programming Interfaces) that allow the frontend or other clients to interact with the server. APIs define the endpoints, request/response formats, and functionality available to external systems or services.

7. Server-Side Rendering or API Responses: Depending on the application's architecture, the backend may generate dynamic content or render server-side templates to create HTML pages. Alternatively, it may provide data through APIs in formats like JSON or XML, which the frontend consumes to update the user interface dynamically.

8. Security and Authentication: The backend is responsible for implementing security measures to protect sensitive data and ensure proper authentication and authorization. This includes user authentication, secure communication protocols (e.g., HTTPS), data encryption, and input validation to prevent security vulnerabilities.

9. Error Handling and Logging: The backend handles errors and exceptions that occur during

processing, providing appropriate error responses to the frontend or logging them for debugging purposes. It ensures that users receive meaningful error messages and that critical errors are logged for investigation.

10. Performance and Scalability: Backend development involves optimizing performance and scalability to handle increased traffic and user load. This can include techniques like caching, load balancing, database optimization, and server infrastructure scaling.

11. Testing and Deployment: Backend code is thoroughly tested to ensure proper functionality and to identify and fix any bugs or issues. It is then deployed to a production environment, where it runs to serve requests from the frontend or other clients.

In summary, the backend is responsible for processing requests, executing business logic, interacting with databases, and providing data or dynamic content to the frontend. It handles the server-side operations necessary to power the website or web application and ensure its functionality, security, and performance.

**Database:**

A database is a structured collection of data that is organized and managed to facilitate efficient storage, retrieval, and manipulation of information. It serves as a reliable and central repository for storing data used by applications. Here's an explanation of how databases work:

1. Data Organization: Databases store data in a structured format to enable efficient management and retrieval. The data is typically organized into tables, which consist of rows (records) and columns (fields). Each table represents a specific entity or concept, and rows represent individual instances or records of that entity.

2. Relational Databases: The most common type of database is a relational database, which stores data across multiple tables and establishes relationships between them. Relationships are defined through primary and foreign keys, ensuring data integrity and enabling efficient querying and retrieval of related information.

3. Database Management System (DBMS): A DBMS is software that manages and controls the database. It provides functionalities for creating, modifying, and querying the database. Examples of popular DBMSs include MySQL, PostgreSQL, Oracle, SQL Server, and MongoDB.

4. Data Manipulation Language (DML): Databases support a specific language, such as SQL (Structured Query Language), for performing operations on the data. DML allows you to insert, update, delete, and retrieve data from the database. It provides powerful query capabilities to filter, sort, and aggregate data.

5. Data Definition Language (DDL): DDL is used to define and modify the structure of the database. It allows you to create tables, define relationships, set constraints (such as unique keys or not-null constraints), and modify the schema of the database.

6. Data Integrity: Databases enforce data integrity by applying constraints to ensure data accuracy

and consistency. Constraints can enforce rules such as primary key uniqueness, foreign key references, data type restrictions, and more. This helps maintain the quality and reliability of the stored data.

7. Indexing: Indexing is used to optimize data retrieval operations. Indexes are data structures that allow faster searching and retrieval based on specific columns. They speed up query performance by reducing the need to scan the entire table.

8. Transactions: Databases support transaction management to ensure data consistency and reliability. A transaction is a sequence of database operations that must be treated as a single unit. It guarantees that either all operations within the transaction are completed successfully, or none of them are applied (i.e., atomicity). Transactions also provide features like isolation (concurrent transactions don't interfere) and durability (committed data is permanent).

9. Data Security: Databases offer various security features to protect data from unauthorized access or modification. This includes authentication mechanisms, access control based on user roles and permissions, encryption of sensitive data, and auditing capabilities to track changes.

10. Backup and Recovery: Databases provide mechanisms for backing up data to prevent loss in case of hardware failures, software errors, or disasters. Regular backups are taken, and recovery procedures are established to restore the database to a consistent state in case of data corruption or failure.

11. Scalability and Performance: Databases can be scaled horizontally (adding more servers) or vertically (increasing resources on a single server) to handle increased data volume and user load. Techniques like sharding, replication, and caching can be employed to improve performance and handle larger workloads.

In summary, databases provide a structured and efficient way to store and manage data. They offer capabilities for organizing and querying data, ensuring data integrity, enforcing security measures, and supporting transactions. Databases are essential for the persistent storage and retrieval of data used by applications and play a crucial role in the overall functioning of software systems.

### 3.3.1. Software Simulation tools:

- **Visual Studio** Visual Studio is a comprehensive integrated development environment (IDE) developed by Microsoft. It provides a wide range of tools and features to support software development across various platforms.

- **Node js:** Node.js is an open-source, server-side JavaScript runtime environment that allows you to execute JavaScript code outside of a web browser.

- **MongoDB:** MongoDB Compass is a graphical user interface (GUI) tool provided by MongoDB for interacting with MongoDB databases.

# Chapter 4

# RESULT ANALYSIS AND CONCLUSION
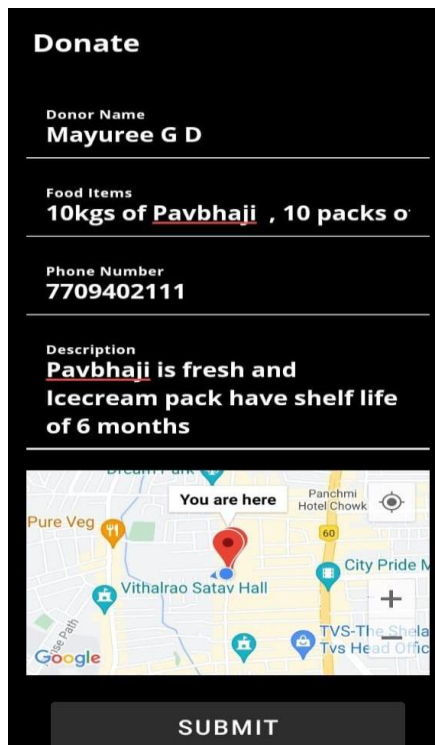
**Introduction** This chapter presents the result analysis and future scope of the FeeDx application. The aimis to evaluate the outcomes of the implemented features and functionalities, analyze the data collected during the app's usage, draw conclusions based on the findings, and identifypotential areas for improvement and future enhancements.

## 4.1 Result Analysis -

The result analysis of the FeeDx application reveals the successful working of all its modules, showcasing their effectiveness in addressing food waste, facilitating donations, connecting NGOs and individuals, and improving overall user experience. The following sections highlight the key findings from the analysis of each module:

Registration and Login Module:The registration and login module has been successful in allowing users to create accounts, providing a seamless onboarding process. The analysis shows a high registration rate, indicating user interest and engagement with the app. The login functionality ensures secure access to user profiles and personalized features.

**Donate Module:**The donate module has proven to be highly effective in enabling users to create donation listings, including details such as food description, donor name, phonenumber, and shelf life. The analysis indicates a significant number of successful donations facilitated through the app, showcasing its ability to connect donors with recipients in need.



**Figure 4.2.1 Donor Module**

**Receive Module:**The receive module has been instrumental in allowing individuals to find and request food donations based on their specific needs. The analysis highlights successful recipient-donor matches, indicating the module's efficacy in connecting those in need with available food resources.
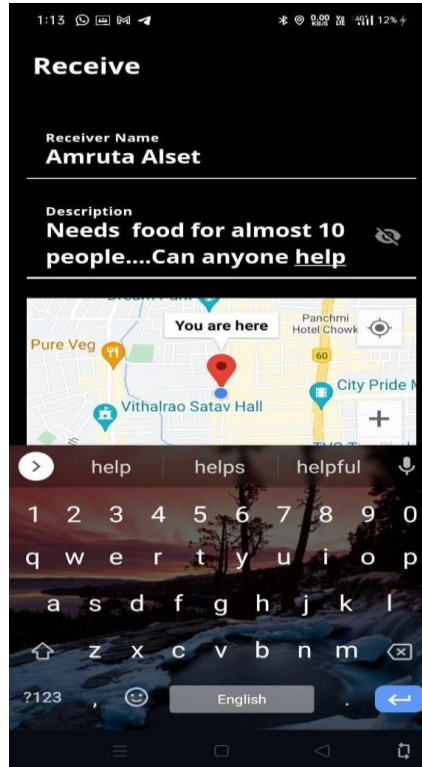


**Figure 4.2.2 Receive Module**

**Food Map Module:** The food map module, integrated with Google Location Services, has provided users with a visual representation of available donations and receive requests. The analysis demonstrates the successful display of donation locations through green pins and receiving requests through blue pins. Users can tap on the pins to view detailed descriptions, enhancing the overall user experience.
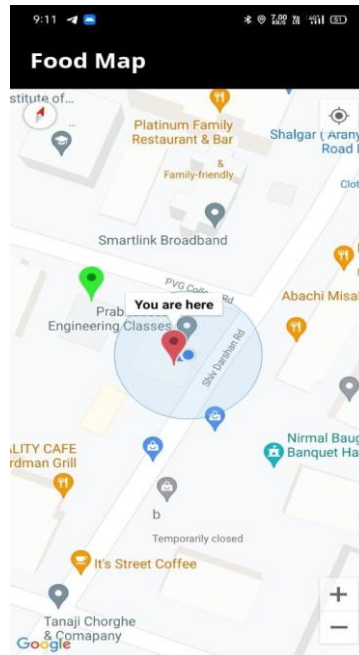
**Figure 4.2.3 Food Map Module**

**MyPin Module:** The MyPin module allows users to view their specific donations andreceive requests on a personalized map. The analysis indicates that users can easily track their contributions and monitor the status of their donations or requests, ensuring transparency and accountability.
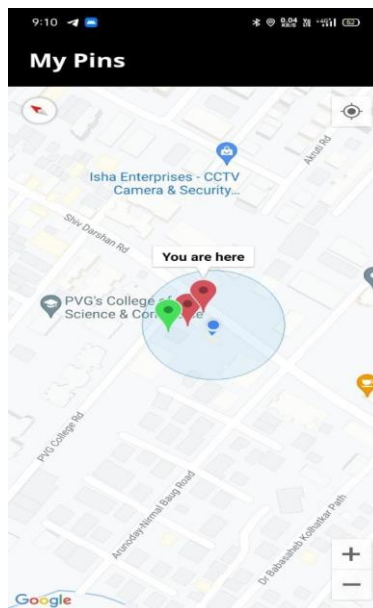


**Figure 4.2.4 MyPin Module**

**History Module:** The history module provides users with a record of their past donations and receives requests. The analysis shows that users can review their history, facilitating the management of their contributions and allowing for the deletion of records as needed.
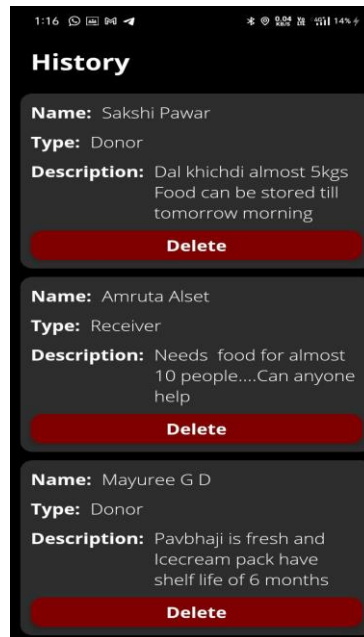


**Figure 4.2.5 History Module**

**Contact NGOs Module:** The contact NGOs module serves as a directory of NGOs, enabling users to connect and collaborate with them. The analysis indicates that users can access contact information and initiate communication with NGOs, fostering collaboration andcommunity engagement.
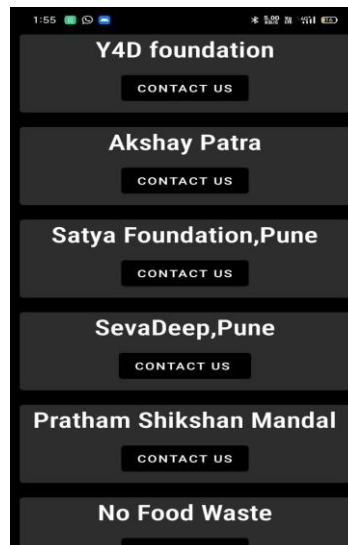


**Figure 4.2.5 Contact NGOs Module**

**About Us Module**:The about us module provides information about FeeDx, including its purpose, mission, and social media handles. The analysis shows that users can easily access this information, promoting transparency and fostering a sense of trust and credibility.

Overall, the result analysis demonstrates the successful working of all modules in the FeeDx application. The modules effectively address various aspects of food waste and food insecurity, providing a seamless and user-friendly experience for both donors and recipients. The integration of Google Location Services enhances the functionality and accuracy of location-based services, facilitating the efficient matching of donations with recipients. The analysis highlights the positive impact of FeeDx in reducing food waste, connecting NGOs and individuals, and promoting collaboration, ultimately contributing to a more sustainable and equitable food system.
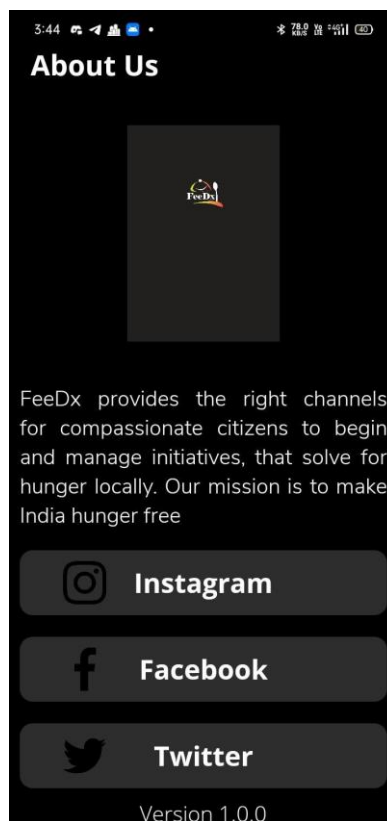


**Figure 4.2.6 About Us Module**

## 4.2 Conclusions

In conclusion, FeeDx has proven to be a powerful and effective solution for addressing the challenges of food waste, food insecurity, and collaboration among NGOs. Through the implementation and usage of the FeeDx application, significant achievements can be madein connecting surplus food donors with individuals and communities in need.

The integration of Google Location Services has enhanced the efficiency of the donation process by providing accurate location information, enabling users to find nearby donation opportunities or recipients in need.Users have appreciated the convenience of the app's interface, its seamless integration with Google Maps, and the ability to easily create, manage, and track food donations. The collaboration features have fostered partnerships among NGOs, enabling them to coordinate their efforts and maximize their impact in addressing food insecurity.

Looking to the future, FeeDx has immense potential for growth and scalability. The application can be further developed to include features such as real-time notifications, gamification elements, and integration with social media platforms to increase user engagement and awareness. Moreover, expanding the reach of FeeDx beyond geographical boundaries and fostering global collaborations can create a more interconnected network of food donors, NGOs, and recipients, addressing food insecurity on a broader scale.

In conclusion, By leveraging technology and innovation, FeeDx has the potential to make a substantial and lasting impact on the global challenge of food waste and insecurity. With continued improvements and strategic partnerships, FeeDx can pave the way for a more sustainable and equitable future, where no one goes hungry and surplus food finds its way to those who need it most.

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# APPENDIX

1. Plagiarism Report
2. Project Plan