

ONLINE UNUSED MATERIAL DONATION SYSTEM**Abhishek Kumar Singh¹, Ashutosh Pandey², Mr. K. Suresh³****Article History: Received: 11.02.2023****Revised: 26.03.2023****Accepted: 11.05.2023****Abstract**

The main purpose of the online unused material donation System is too unused materials can be given to poor people such as food, clothes, medicine, and other material which is required of the things to person at that time. Now's days Many people are affected by these types of things when we talk about India. In India, over 20 crore Indians will want these types of necessary things, through the online unused material Donation system we can try to solve the problem of poor people. In India, 27% of people die due to hunger because they were cannot afford food so with the help of this web application we can help the poor people and try to save their lives of people as well. In India many Hostels, restaurants, Hotels, cafes, and many more places where always the food is going to be wasted so the remaining food after eating of the customer, students we were trying to serve that food to the people who have required this thing. The same things were we doing with clothes and by the government policies and government hospitals we were trying to save the life of people, so this is our concept and we were going to work on this topic we were explaining all the things in very easy and clear language by which everyone can read this and can know how we can help the people through the Online unused material Donation System. In this organization, there are three people namely, ADMIN, NGO, and USER. Admin will log in and manage users by deleting and blocking the users providing improve or expired Medicine, he also consults with the NGO. Admin will manage the server traffic problem. NGO has given us access and through NGO we can serve food to the poor people. And the third and last one is the User who can fill in the detail by which our team reached that place where we can help the poor people. That is a basic function of the Unused material Donation System.

The tools and technology used for developing an online unused material donation system in tools are Java, Spring Boot, SQL, Html, CSS, Hibernate, sprit API, Git, JDBC, JSP, Google map, and other skill and Technology systems used in Eclipse, Apache, Mysql.

Those tools and technologies can help build a successful website to make an online unused material donation system that can be easier to use by developers and doner and easy to collaborate with others. It sounds like you have a good set of tools and technologies to develop an online unused material donation system. By incorporating these features into the Unused Material Donation System, you can create a seamless and effective platform for serving food to those in need.

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1. Introduction

An online unused material donation system is a platform that allows individuals or organizations to donate unused or surplus materials to others who may need them. This type of system is often used to facilitate the exchange of goods that would otherwise go to waste, such as clothing, food, medicine, and other household items. The online platform can be a website or a mobile application that enables users to upload details of the unused items they wish to donate. Donors can provide a description of the item, its condition, and its location. Potential recipients can search for items that they need and make requests for them. This type of system is beneficial for several reasons. First, it reduces waste by diverting unused items from landfills. Second, it provides a means for those in need to access items they may not be able to afford. Finally, it fosters a sense of community by allowing people to help one another.

The android-based application for NGO's that you are proposing is an excellent idea to help address the issue of food wastage and food shortage. By providing a platform for people and organizations to donate remaining food to those in need, you can help reduce waste and ensure that people have access to food. The application could work by allowing restaurants, hotels, and other organizations to upload information about the remaining food they have at the end of the day. This information could include the type of food, quantity, and location. Individuals or NGOs who are interested in receiving the food can then search for available donations in their area and request them. The application could also have features such as a tracking system to ensure that the donated food is picked up and delivered to the intended recipients. This would help to prevent food from going to waste and ensure that it reaches those who need it most.

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Literature Survey / Related Work

To conduct a literature survey on the topic of an

android-based application for NGO's that facilitates the donation of remaining food, we can look at previous research and studies that have been conducted on similar topics. Here are some examples:

"A Review of Food Waste Prevention and Reduction" by Siavash Etemadnia, et al. This study provides a comprehensive review of the current state of research and practice related to food waste prevention and reduction. It identifies several challenges and opportunities for addressing food waste and highlights the importance of technology-based solutions like mobile applications.

"A Review of Mobile Applications for Food Waste Reduction" by Fadwa Alshawaf, et al. This review article examines the various mobile applications that have been developed to reduce food waste. It provides a critical analysis of the features, functionalities, and effectiveness of these applications and suggests areas for improvement.

"An Exploratory Study on Food Waste Reduction Practices among Singapore Households" by Li Li, et al. This study investigates the food waste reduction practices of households in Singapore and identifies the factors that influence their behavior. The study highlights the potential role of technology-based interventions like mobile applications in promoting behavior change and reducing food waste.

"Reducing Food Waste through Social Innovation: An Analysis of Local and Global Initiatives" by Sonia Ferrari and Francesca Forno. This paper provides an overview of the various local and global initiatives aimed at reducing food waste. It highlights the importance of social innovation and collaborative partnerships in developing effective solutions and discusses the potential role of mobile applications in facilitating food waste reduction.

"Developing a Mobile Application for Food Waste Reduction" by Rui Chen and Mingming Liu. This study describes the development of a mobile application for food waste reduction and evaluates its effectiveness in changing users' behavior. The study highlights the importance of user-centered design and personalized feedback in developing effective mobile applications for food waste reduction.

Problem Definition

The problem that the online unused material donation system aims to address is the wastage of usable items and resources that could be put to better use by those in need. Many people and organizations have items and materials that they no longer need, but these items often end up being thrown away or left unused, taking up space and contributing to environmental waste.

At the same time, there are many people and communities who could benefit greatly from these unused materials, but they lack the means to

acquire them. This creates a situation where usable items go to waste while people in need go without.

Project Life Cycle

The The project life cycle for the Online Unused Material Donation System could follow the waterfall model, which consists of the following phases:-

Requirements gathering and analysis: In this phase, the requirements for the system will be identified and analyzed. This includes understanding the needs of the end-users, determining the functionalities that the system must perform, and defining the scope of the project.

Design: In this phase, the system design will be developed based on the requirements identified in the previous phase. This includes creating a detailed architecture of the system, determining the hardware and software requirements, and designing the user interface. Implementation: In this phase, the actual coding of the system will be done based on the design developed in the previous phase. This includes writing code, integrating various components of the system, and testing the system.

Testing: In this phase, the system will be thoroughly tested to ensure that it meets the

requirements and functions properly. This includes testing the system for bugs, errors, and performance issues.

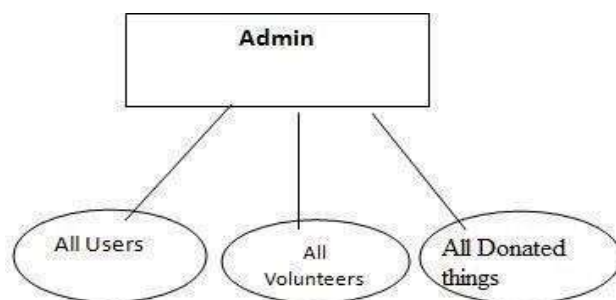
Deployment: In this phase, the system will be deployed in the production environment. This includes installing the system on the server and providing training to the end-users.

Module 1: Admin web-based application.

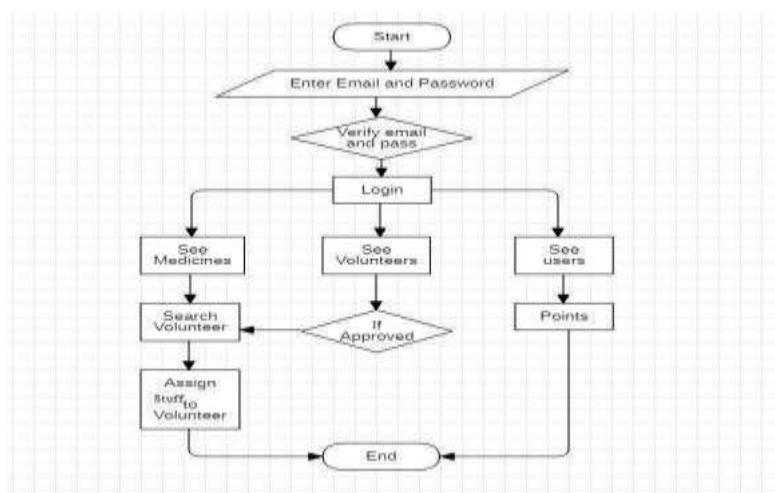
Another important feature of this module is the management of available medicines. The admin can add new medicines, update the details of existing medicines, and delete medicines that are no longer available. The admin can also view the current stock of medicines and generate reports on the availability of medicines.

The admin site web-based application also allows the administrator to view and manage user activity. The admin can see which users are currently logged in and what actions they are performing. This helps the admin to ensure that the system is being used in a responsible and productive manner. assign respective things.

- A. Users
- B. Volunteers
- C. Donated



Block Diagram



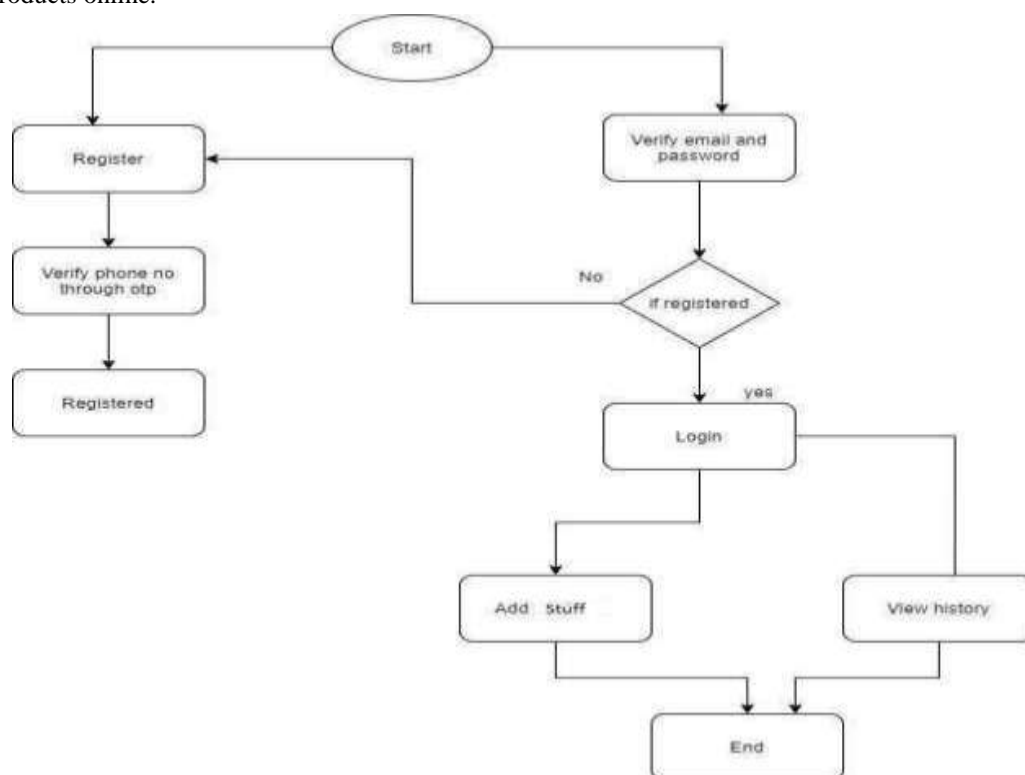
Flowchart

- A. As an admin, you have access to view all the users' details in the system. This includes their username, contact number, address, donation, and medicine-related data such as medicine name and medicine description.
- B. In this system, volunteers would need to provide their name, email address, photo, and contact information in order to sign up. Additionally, they would need to be approved by an administrator before they can begin volunteering.
- C. A donated online unused material system is a platform or software that enables individuals or organizations to donate unused materials or products online.

Module 2: User

It is common for online donation systems to require users to register and verify their phone number in order to donate items. This helps to ensure that the donor's information is accurate and that the organization or recipient can easily contact them if needed.

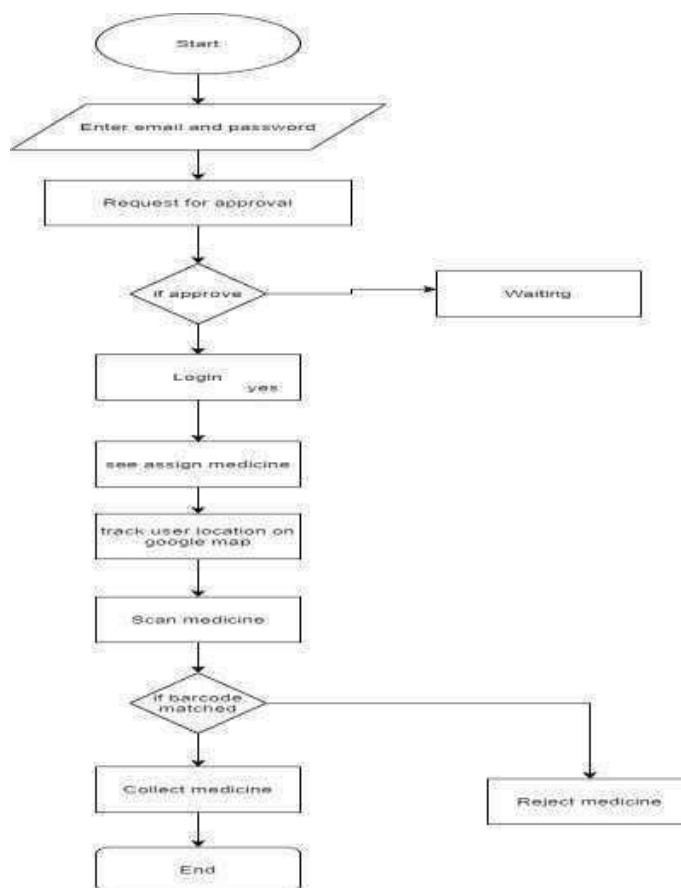
This can help donors keep track of what they have donated in the past and may encourage them to donate more in the future. Additionally, providing information about the volunteer who will be picking up the donated items can help to build trust between the donor and the organization.



Module 3: Volunteers

It is important to leverage technology to help improve the efficiency and effectiveness of donation systems. By using a mobile app, users can easily donate items and volunteers can quickly respond to requests for pickup and delivery. In addition to items such as clothes, books, and utensils, it is also important to consider donations of medical supplies, such as medicine. By providing detailed information about the medicine,

including the sender's address and delivery to the NGO's address, the system can help to ensure that these critical items are delivered to those who need them in a timely and efficient manner. Reducing food waste is another important goal that can be addressed through a donation system.



Algorithm

STEP 1: Start the application.

STEP 2: Register by providing the necessary details and verify your phone number.

STEP 3: If you want to donate items, go to the donation page and click on the "Donate Now" button.

STEP 4: Provide a detailed description of the item you want to donate, including its name, category, quantity, condition, and pickup address.

STEP 5: Once submitted, the system will automatically send a pickup request to the nearest volunteer.

STEP 6: The volunteer will receive a notification and can accept or reject the pickup request based on their availability. STEP 8: If everything is in order, the volunteer will accept the item and deliver it to the NGO's address as requested.

STEP 9: Once the donation is successfully delivered, the donor, volunteer, and NGO will receive a confirmation message.

STEP 10: If you are a volunteer, go to the volunteer page and click on the "Become a Volunteer" button. Fill in the necessary details and wait for admin approval.

STEP 11: Once approved, the volunteer can view available donation requests and accept them.

STEP 12: The system will maintain a record of all donations and volunteer activities for future reference and analysis.

STEP 13: If you are an NGO in need of donations, go to the NGO page and provide your organization's details and the type of items you need.

STEP 14: Once a donation matches your requirements, the system will automatically notify you.

STEP 15: End the application.

System Description

The system comprises of 3 entities with their modules as follows

Admin

To login as an admin in the online unused material donation system, follow these steps:

Go to the login page of the web application. Enter the admin username and password in the respective fields. Click on the "Login" button.

If the entered credentials are correct, the admin will be logged in to the system and redirected to the dashboard.

Registration:

Find the website of the organization or platform that runs the online material donation system.

Look for a "Register" or "Sign up" button/link on the website. This might be located in the top right-hand corner of the page.

Click on the "Register" or "Sign up" button/link to

start the registration process.

How to password change:-



3) Click on the user profile page. 3) Within the settings or account section, look for a "Change Password" option.

Tools and Technology :

For developing an online unused material donation system in Java, you could consider the following tools and technologies:

1. Spring Boot: Spring Boot is a popular Java web framework that provides a lot of pre-built functionality for building web applications. It includes features like security, data access, and application configuration.
2. Hibernate: Hibernate is a popular object-relational mapping (ORM) tool for Java. It can be used to manage the application's database and handle CRUD operations on the donated items, donors, and donation centers.
3. Thymeleaf: Thymeleaf is a server-side Java template engine that can be used to build the UI of the donation system. It allows for dynamic content and easy integration with other Java technologies.
4. Stripe API: Stripe is a popular payment gateway that provides an API for integrating payment processing into web applications. You could use the Stripe API to handle payments securely in your donation system.
5. Google Maps API: The Google Maps API can be integrated into your donation system to help donors and recipients find the nearest donation center. It provides geolocation services, routing, and mapping functionality.
6. Apache Tomcat: Apache Tomcat is a popular web server and servlet container for Java web applications. It can be used to host your donation system and handle incoming HTTP requests.
7. Git: Git is a popular version control system that can be used to manage your donation system's source code. It provides features like branching, merging, and code reviews, making it easier to collaborate with other

- 1) Log in to your account on the website.
- 2) Look for a "Settings" or "Account" option in the navigation menu.

developers.

8. Overall, these tools and technologies can help you build a robust, secure, and scalable online unused material donation system in Java. You could also consider using other Java technologies like JPA, Maven, or Jenkins, depending on your specific needs and requirements.

JDBC:

1. JDBC Driver: JDBC driver is a software component that enables Java applications to interact with the database. You will need to choose the JDBC driver that matches your database system, such as MySQL or PostgreSQL.
2. Apache Tomcat: Apache Tomcat is a popular web server and servlet container for Java web applications. You can use it to host your donation system and handle incoming HTTP requests.
3. Eclipse IDE: Eclipse is a popular integrated development environment (IDE) for Java developers. It provides tools for writing, debugging, and testing Java applications.

JSP:-If you want to use JSP (JavaServer Pages) to develop an online unused material donation system, you could consider the following tools and technologies:

Apache Tomcat:- Apache Tomcat is a popular web server and servlet container for Java web applications. You can use it to host your donation system and handle incoming HTTP requests.

Java Servlets:- Java Servlets are Java classes that can be used to handle HTTP requests and generate dynamic web content.

Advantages and Applications : -

There are several advantages of an online unused material system donation system:-

1. Easy and convenient: With an online system, donors can easily donate their unused materials from anywhere and at any time, without having to physically go to a donation center. This convenience can encourage more people to donate.
 2. Increased reach: Online systems have a broader reach than traditional donation systems, as they can reach donors from all over the world. This can lead to a larger number of donations.
 3. Reduced costs: Online donation systems are usually less expensive to maintain than traditional systems, as they do not require the same level of staffing or infrastructure.
 4. Improved tracking: With an online system, it is easier to track and manage donations. The system can provide real-time updates on donations received, donor information, and the status of the donated items.
 5. Better transparency: Online donation systems can increase transparency by providing a clear and accessible record of all donations made. This transparency can help build trust between the donors and the donation centers.
 6. Enhanced communication: Online systems allow for more efficient communication between donors and donation centers. Donors can ask questions or get more information about the donation process, and donation centers can provide updates on the impact of the donations.
- Overall, an online unused material system donation system can make the donation process more efficient, convenient, and accessible for donors.

2. Conclusion

In conclusion, an online unused material donation system is a convenient and efficient way to facilitate the donation of unused materials to those in need. With the use of technology, donors can easily make donations from anywhere and at any time, while donation centers can manage and track the donations more effectively. The system also provides better communication, transparency, and trust between donors and donation centers.

By implementing an online unused material donations system, we can encourage more people to donate and reach a broader audience of potential donors. This can result in a larger number of donations, which can have a significant impact on those in need.

Overall, an online unused material donation system is a win-win for both donors and donation centers, providing a simple, efficient, and transparent way to make a difference in the lives of others.

Acknowledget

Acknowledging an online unused material

donation system involves recognizing the people and resources that have contributed to its development and implementation. Some potential acknowledgments could include:

The donors who have contributed their unused materials to the system, helping to make a positive impact on the lives of others.

The developers who have worked on creating the system, including software engineers, web developers, and database administrators.

The designers who have created the user interface and experience for the system, ensuring that it is intuitive and easy to use for donors.

Overall, acknowledging the people and resources involved in the online unused material donation system can help to recognize their contributions and show gratitude for their efforts in making the system a success.

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