

NATIONAL INSTITUTE OF TECHNOLOGY DELHI



PROJECT REPORT

Give.com

(Website for donation and requesting medicines, goods etc)

SUBMITTED TO:

Dr. Lella Rajya Laxmi

Assistant Professor

Department of Computer Science & Engineering.

SUBMITTED BY:

Ankit kr Rouniyar

CSE 2nd Year

Roll: 181210011

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CONTENTS

1. PROBLEM STATEMENT.....	1
2. ABSTRACT.....	2
3. SYSTEM ANALYSIS.....	3
4. IMPLEMENTATION.....	9
5. PROJECT OUTCOME.....	18
6. CONCLUSION AND FUTURE SCOPE.....	20
7. REFERENCES.....	21

1. PROBLEM STATEMENT:

A Website has to be created that facilitates sharing/donation of things among NITD students and employees. The authorized members should be able to post requests and donations.

It should support donation of medicines and blood also but in a safe manner.

2. ABSTRACT:

The name of the project is give.com. It is the project made under the guidance of Dr. Lella Rajya Laxmi for the summer project. Give.com is a website which helps the student and the employees of NIT Delhi to donate things like books, medicines etc. and it also has the functionality to post request. In addition to that someone can mail everyone in the database for blood related emergency or some other kind of emergencies immediately.

In the website a user has to sign up or login to use its functionality. After the successfully signup or login the user can view the list of available donations, medicines and requests and post in it too.

The website is made in Model-View-Controller (MVC) framework using HTML, CSS, JavaScript, jquery, Bootstrap, php and Mysql. The website is hosted on ecowebhosting.uk.com

3. System Analysis:

Analysis can be defined as breaking up of any whole so as to find out their nature, function etc. It defines design as to make preliminary sketches of; to sketch a pattern or outline for plan; to plan and carry out especially by artistic arrangement or in a skillful way. System analysis and design can be characterized as a set of techniques and processes, a community of interests, a culture and an intellectual orientation.

It is the most creative and challenging phase of the system life cycle. During system analysis, the analyst studies the current system and proposes alternative replacement systems. Here, the analyst thoroughly studies the organization's current procedures and the information systems used to perform organizational tasks. The analyst work with users to determine what the users want from a proposed system. The analyst carefully studies the current manual and computerized system that might be replaced or enhanced as part of this project. The analyst studies the requirements and structures them according to their interrelationships and eliminates any redundancies; generates alternative initial designs to match the requirements; compare these alternatives to determine which best meets the requirements within the cost, labor, and technical levels the organization is willing to commit to the development process. The output of this phase is a description of the recommended alternative solution. Once the recommendation is accepted by owners, you can begin to make plans to acquire any hardware and system software necessary to build or operate the system as proposed. The steps involved during system analysis process are:

1. Understanding application

2. Planning
3. Scheduling
4. Developing candidate solution
5. Performing trade studies
6. Performing cost benefit analysis
7. Recommending alternative solutions
8. Selling of the system

System analysis can include looking at end-user implementation of a software package or product and involves gathering requirements for the system. In System Analysis more emphasis is given to understanding the details of an existing system or a proposed one and then deciding whether the proposed system is desirable or not and whether the existing system needs improvements. Thus, system analysis is the process of investigating a system, identifying problems, and using the information to recommend improvements to the system. The project should address a real world interface design and be implementable. Feasibility Study is a major process in System Analysis. It helps in determining whether the project will yield a desired output with realistic and economic use of available resources.

Requirement Analysis

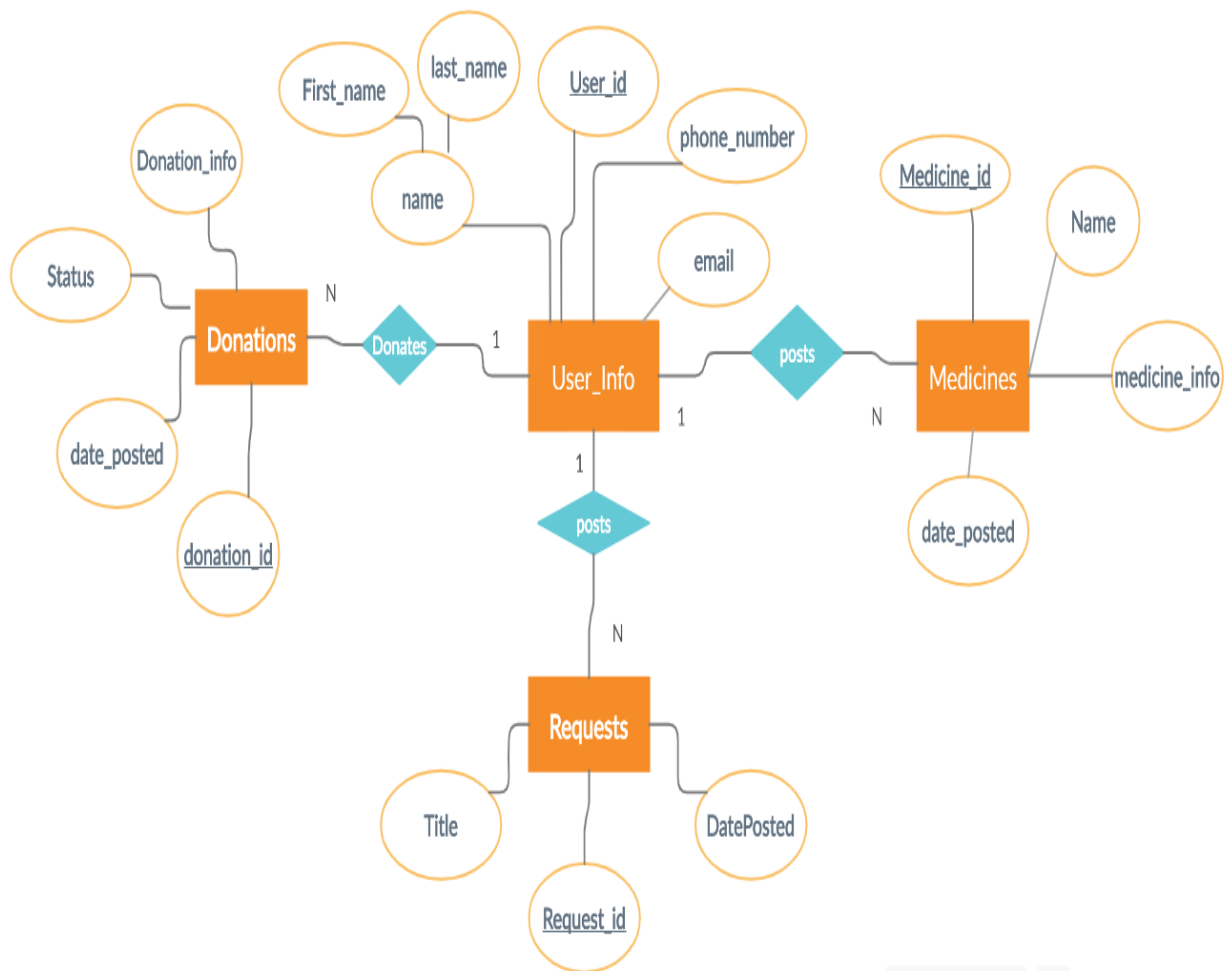
Requirements analysis is critical to the success of a system or software project. The requirements should be documented, actionable, measurable, testable, traceable, related to identified business needs or opportunities, and defined to a level of detail sufficient for system design.

Functional requirement

In web development, functional requirements provide Web developer with a blueprint of how the web application and its component will behave or function. The functional requirements describe what the application system should do. The functional requirements of the application are as follows:-

- The website will provide a login/sign up functionality so that only authorized members can access the site.
- The website should provide the list of available donations, requests and medicines.
- The website should provide an option to mail everyone in the database in case of blood related emergency or other emergencies.
- The user will be able to add/delete their donations, posts and requests.
- The user will be able to search for specific donation, post and request.

ER DIAGRAM



Non -functional requirement:

Non-functional requirements are not concerned with the functions of the system. Instead, they look at the criteria to which the website is expected to conform to. Non-functional requirements can include things like response time and reliability. Some of the non-functional requirements for the website are:

- Web application should be compatible with the last three major versions of Firefox, Chrome, Safari and Internet Explorer.
- All the components of application should be fully loaded within reliable time without downgrading performance.
- Should be user friendly and content should be readable by all types of users.
- Should take minimal time, effort, resources or cost to create the web application.
- Should provide the correct information about all the modules.
- Should consider the Response times such web page loading, screen open and refresh times of each page.

Accuracy

- The system should accurately provide real time information taking into consideration various concurrency issues.
- The system should provide 100% access reliability.

Performance Requirement

- The information is refreshed at regular intervals depending upon whether some updates have occurred or not. The system should respond to the member in not less than two seconds from the time of the request submission. The system may take more time when doing large processing jobs.
- Responses to view information should take no longer than 5 seconds to appear on the screen.

Reliability Requirement

- The system has to be 100% reliable due to the importance of data and the damages that can be caused because of the incorrect or incomplete data. The system should run 7 days a week, 24 hours a day.

Technical Requirement:-

Hardware Requirement

- Minimum 350MB Hard Disk space for installation.
- Recommended minimum CPU - Pentium 4, 3.2GHz.
- Recommended 1GB RAM for a Central Server with 3 Nodes .
- Internet.

Software Requirement

Application system : Sublime text, Apache

Language : HTML, CSS, Bootstrap, JavaScript, PHP

4. Implementation:

The various implementation tools are listed below:

Operating System : Windows 10

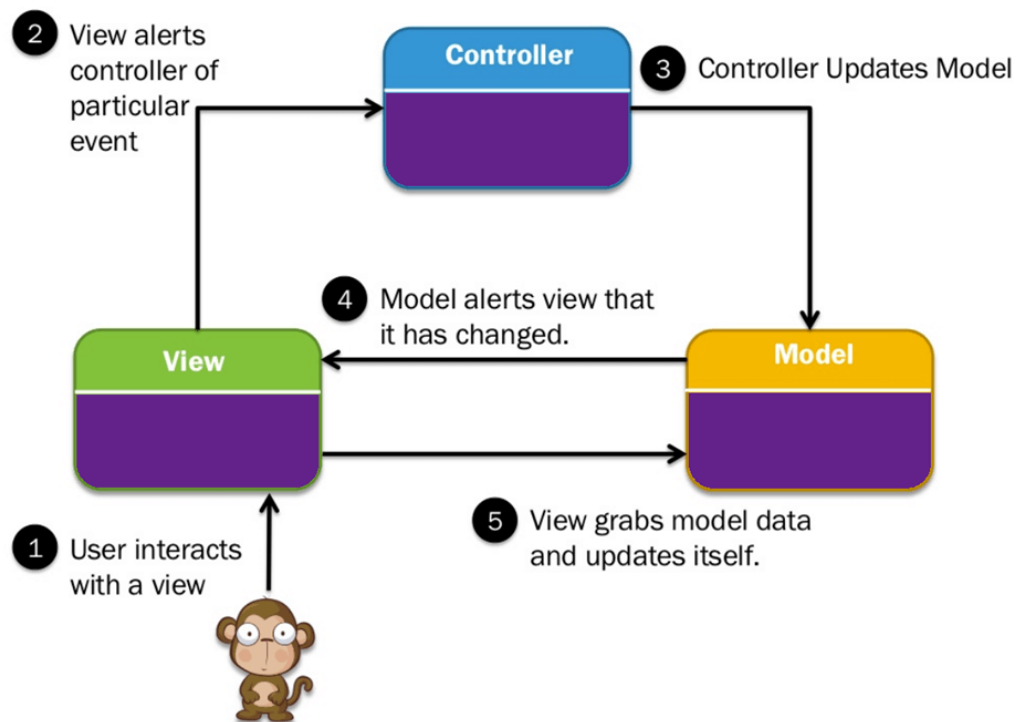
Development environment: HTML5, CSS3, Bootstrap, JavaScript, JQuery, PHP

IDE : Sublime Text

Web Server : ecowebhosting.com.uk

The website was built in MVC architecture which is the mostly used architectures to build web applications. MVC offers full control over your Html as well as URLs. The three main components of MVC framework are

- Model: It includes all the data and its related logic
- View: Present data to the user or handles user interaction
- Controller: An interface between Model and View components



MVC Architecture Diagram (Source: <https://www.guru99.com/mvc-tutorial.html>)

Tools used for the front end:-

1. HTML

HTML (Hypertext Markup Language) is the most basic building block of the Web. It describes and defines the content of a webpage. "Hypertext" refers to links that connect web pages to one another, either within a single website or between websites. Links are a fundamental aspect of the Web. By uploading content to the Internet and linking it to pages created by other people, you become an active participant in the World Wide Web. HTML uses "markup" to annotate text, images, and other content for display in a Web Browser.

2 CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language. CSS is designed primarily to enable the separation of document content from document presentation, including aspects such as the layout, colors, and fonts. It allows one to adapt the presentation to different types of devices, such as large screens, small screens, or printers. CSS is independent of HTML and can be used with any XML-based markup language.

3 Bootstrap

Bootstrap is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first web sites. Bootstrap is a free and open-source front-end web framework for designing websites and web applications. It contains HTML- and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions. Bootstrap components such as navbar, Breadcrumbs, paginations and Bootstrap's JavaScript plugins such as dropdown, modals, carousel etc. are used in Training Management web application. Bootstrap includes a

powerful mobile-first flexb bbox grid system for building layouts of all shapes and sizes. It's based on a 12 column layout and has multiple tiers, one for each media query range.

4 JavaScript

JavaScript is the client side scripting language of the web. It's one of the most popular and in demand skills in today's job market for good reason. JavaScript not only enables you to add powerful interactions to websites, but is also the foundation of a lot of commonly used libraries like jquery.

5. jQuery

jQuery is a lightweight, "write less, do more", JavaScript library. The purpose of jQuery is to make it much easier to use JavaScript on your website. jQuery takes a lot of common tasks that require many lines of JavaScript code to accomplish, and wraps them into methods that you can call with a single line of code.

jQuery also simplifies a lot of the complicated things from JavaScript, like AJAX calls and DOM manipulation.

Tools used for the backend:

1. PHP: PHP is a server scripting language, and a powerful tool for creating interactive, dynamic and responsive web pages. The code is executed on the server unlike other client scripting languages. Its simple for new comer and easy to use.

2. MySQL:

MySQL is a database system used on the web. It is a database system that runs on a server. It is ideal for both small and large applications. It

is very fast, reliable, and easy to use. It uses standard SQL. It compiles on a number of platforms. It is free to download and use.

PERFORMED TASK:

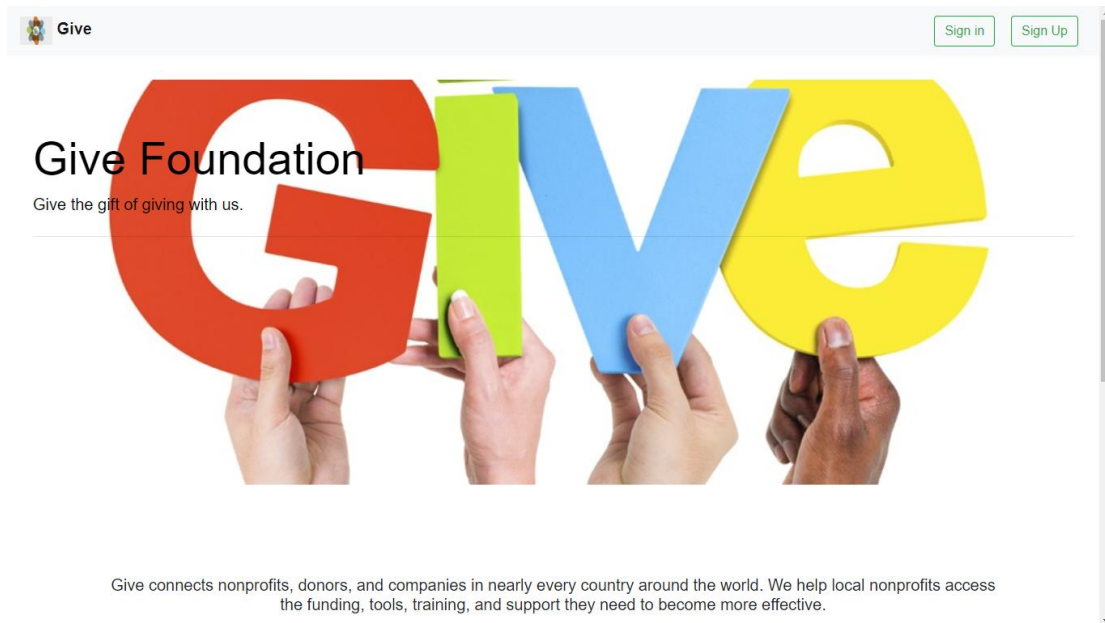
The name of the website is give.com which is made with the help of various technologies. The site is made to ease the process of donating and requesting in the institute. The user can login into the site and access the site. The user will see the list of donations, posts and medicines available. The users information like name, email, phone number is collected at the time of signing up which is later used at the time of posting donations, requests, and medicines. There is also a page where the user can email all the users in the database in case of emergency.

Web page details.

1. Home page
2. Sign up/Sign in form
3. Logged in page
4. Donations page/Requests page/Medicine page
5. My donation/my request/my medicine pages
6. Blood page
7. Search page
8. Donation/request/Medicine posting form.

1. Home page

The home page is the page a user sees when they visit the site. It contains some information and buttons for sign in/sign up.



2. Sign up/Sign in form

Clicking the sign in/sign up button in the home page a form is loaded in the screen using bootstrap modal. It collects the data in from the form and stores it in the database in case of sign up, whereas in the case of login it matches the record in the database and allows access if the information provided is valid.

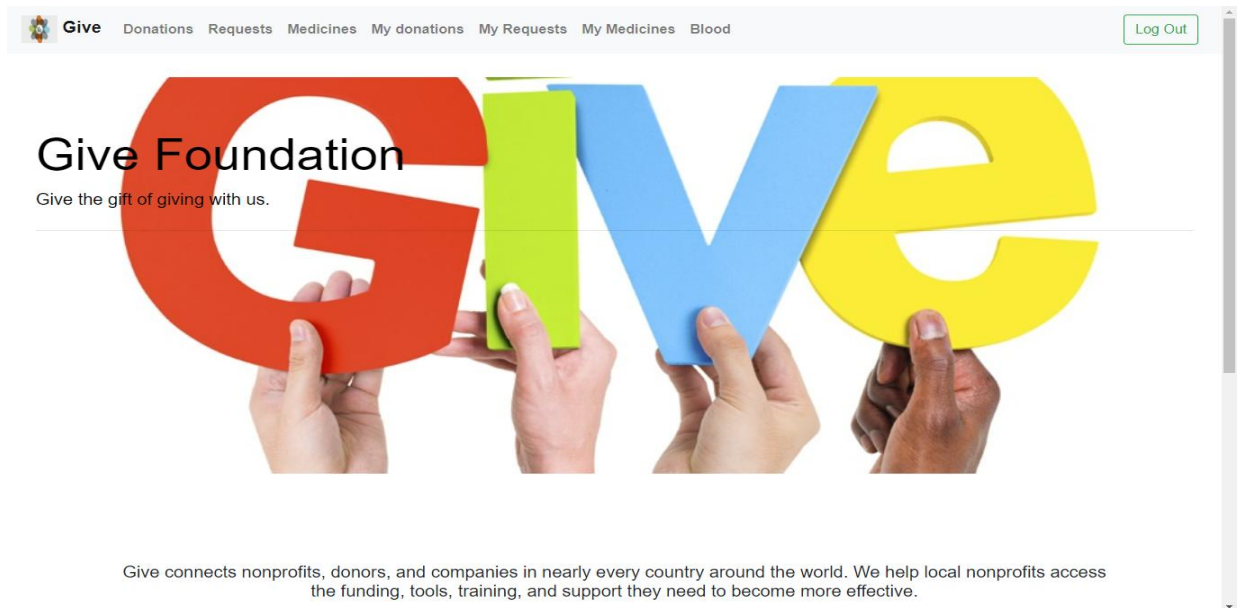
The image shows a 'Sign Up' modal form overlaid on a background image of hands holding large letters 'G' and 'e'. The form has a title bar with a close button. It contains the following fields and elements:

- First Name**: Input field with placeholder 'First name'.
- Last Name**: Input field with placeholder 'Last name'.
- Email address**: Input field with placeholder 'Enter email'. Below it is a note: 'We'll never share your email with anyone else.'
- Password**: Input field with placeholder 'Password'.
- Confirm Password**: Input field with placeholder 'Confirm Password'.
- Phone Number**: Input field with placeholder 'Phone Number'.
- ☐ **Remember Me**
- Buttons at the bottom: 'Close' (grey) and 'Sign up' (blue).

In the top right corner of the background page, there are 'Sign in' and 'Sign Up' buttons.

3. Logged in page

After the successful login or sign up the user is redirected to this page which contains links to different pages in the navbar. It also has button for log out.



4. Donations page/Requests page/Medicine page

The after clicking in any one of the pages you are directed to it where you are shown the related list of data. For example after clicking in donation page you will see the list of donations.

Give Donations Requests Medicines My donations My Requests My Medicines Blood [Log Out](#)

Available items

A book by me
Status:Available

From : Ankit Rouniyar
Contact Information:
Email:-ankit.rouniyar5@gmail.com
Phone: 987654321

Test papers of End sem 2019
Status:Available

From :
Contact Information:
Email:-
Phone:

This is a book
Status:Available

From : Ankit Rouniyar
Contact Information:
Email:-ankitrouniyar5v2@gmail.com
Phone: 2147483647

This is a book
Status:Available

[Search](#)

Donate Items Easily

Status
Available

Donation Description

[Donate](#)

5. My donation/my request/my medicine pages

In these pages you will see your contribution with added functionality like delete and change status (in case of my donation only).

Give Donations Requests Medicines My donations My Requests My Medicines Blood [Log Out](#)

Your Donations

A book by me
Status:Available

From : Ankit Rouniyar
Contact Information:
Email:-ankit.rouniyar5@gmail.com
Phone: 987654321

[Change Status](#) [Delete](#)

Search [Search](#)

Donate Items Easily


Status
Available

Donation Description

[Donate](#)

6. Blood page

In this page the user has to fill the information that they want to convey to all the users in the database.

 **Give** [Donations](#) [Requests](#) [Medicines](#) [My donations](#) [My Requests](#) [My Medicines](#) [Blood](#) [Log Out](#)

Mail people instantly

We will share your message with every one associated with our foundation.

Enter your-number

We will share this number with everone.


Enter your message below

Example: My friends had an accident he needs o positive blood . Contact me if you are near Narela

[SEND MAIL](#)

7. Search page

It takes the input from the search form and displays the result in the three columns.

 **Give** [Donations](#) [Requests](#) [Medicines](#) [My donations](#) [My Requests](#) [My Medicines](#) [Blood](#) [Log Out](#)

Search Results

[Search](#)

Showing results in **Donations** for test

Test papers of End sem 2019
Status:Available
From :
Contact Information:
Email:-
Phone:

Showing results in **Medicines** for test

There is no medicine available

Showing results in **Requests** for test

There is no request available

8. Donation/request/Medicine posting form

These forms allow the user to add their donation, request and medicine in the database.

Make easy requests

Title

Request Description

Request

5. PROJECT OUTCOME:-

5.1 PROBLEM AND SOLUTIONS:-

- Creating the front end of the site from the scratch can be tricky so bootstrap framework is used to get the required page by adding/deleting in the bootstrap components.
- Writing the code in traditional approach, that is, all in one file can be messy and there can lack of maintainability, testability as well as scalability of the application so to avoid that MVC architecture is used.
- Storing the password in the database directly can be a problem if someone gets access to the database. So to avoid that an inbuilt function of PHP is used that encrypts the password as shown.

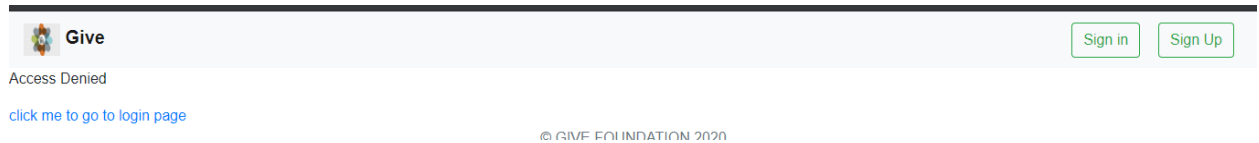


The screenshot shows a database table with two columns. The first column is labeled 'password' and the second column contains a long, complex string of characters: '\$2y\$10\$TYxvJ0n38gEA5vG5Rqd7iea8fBH8BdLphYzk6bgj9S8...'. This represents a password that has been encrypted using a PHP function.

While logging in, the password is again decrypted using inbuilt PHP function and matched with the users entered password.

- While working with CSS sometimes the code doesn't work the way you want writing the clear codes helps a lot.
- Going directly to the members only page without logging in can cause a problem so to avoid that code is added to see if the user is

logged in or not. If the user is logged in, he/she can access the page otherwise his/her access is denied.



5.2 LEARNING OUTCOMES:-

1. HTML

- Basic concept (WWW& HTTP, HTTPS, Client Server Communication), Basic HTML, HTML Forms, HTML5 features.

2. CSS

- Basic CSS, Advance CSS (border-radius, opacity, cursor, layers, position, display, float, gradient, and multiple-column), Concept of Menus, Template, design using CSS div.

3. JavaScript

- Basic JavaScript, JavaScript String, JavaScript advanced (get Element by Id, Inner HTML, Get table, index, DOM, manipulation, Regular Expression).

4. jQuery

- Basic jQuery, effects, DOM manipulation, AJAX etc

5. PHP

- Control Structures, Include, Function, Array, Session variables, Cookies etc.

6. CONCLUSION AND FUTURE SCOPES

CONCLUSION

As a conclusion, I can say that this internship was a great experience. Everything that was outlined in the early stage of the project was achieved and a lot of extra features were also added. The website is easy to use and provides a simple user interface for the users to connect to other users for the purpose of helping each other. The website was tested for bugs in each step of development but it is not flawless and it can be enhanced in the future.

This project took me through the various phases of project development and gave me real insight into the world of software engineering. The biggest thing that I can take away from this project is with regards to the technologies used. A lot of new technologies and areas of software development have been exposed over the scope of this project especially client side and server side development. This has given me a much clearer understanding of the direction I want to take as I start my career as a Software Developer

Future Scope

The project has a very vast scope in future. The project can be implemented on intranet in future. Project can be updated in near future as and when requirement for the same arises, as it is very flexible in terms of expansion. Other features like pictures of the materials donated can be added, email verification and password changing functionalities can be added later.

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