Capstone Project – Phase B

Project Number: 23-1-D-10

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Link to GitHub:

https://github.com/DuduBlanka/Give-Us.git

Table Of Contact

Abstract

Our system, called give-us, asks to prevent food waste and to try to prevent food insecurity.
The system helps large organizations with hundreds of employees as well as event halls to manage their food donations or can encourage them to start donating their surplus food to associations that provide food to needy.
In addition, in our system, even small organizations can donate, such as grocery stores, restaurants, cafes and more.
Individuals who need food donations will be able to discreetly find donations in their neighborhood and thus be able to their food diverse.
Some people cannot afford to buy fruits and vegetables every day.
Our system can save large amounts of food thrown away every year, which is estimated at a lot of money.

1. Introduction

1.1. Scope of the project-

Give us - an application for linking and coordinating donations
The system works on 2 levels:

1.1.1 A big donation

This is a system that allows large organizations to donate their leftover food.
The system simplifies the whole issue of donating food when it connects large organizations such as employers who provide food to their employees and event halls that feed hundreds of invitees per day, to large associations that provide food to hundreds and even more needy people per day.
In Israel and also in the world, huge amounts of food are thrown away every day that could have satisfied the food needs of tens of thousands of needy people a day.
You can understand the large organizations that don't donate, even though everyone knows that in Israel there are many people who need a hot meal every day and in addition throwing the food causes pollution of the environment, today dealing with food donation is cumbersome, there is no system that brings everything together, it is necessary to hire employees to take care of it, and that Of course, it costs the employer money and also takes time.
The system simplifies the entire process of posting the donation, the organization posts the donation in the system and even has the option of donating the donation to a specific organization or freely posting to all the associations, the associations that need these donations to feed hundreds of people a day, will be able to see all available donations in their area of activity and mark the donation and thus ensure the donation is received, this solution allows the association to organize itself since it knows exactly the quantities of food and whether the food needs refrigeration or not, and it can plan a route for collecting donations for that day, thus optimizing the collection of donations and saving time and fuel expenses.
Posting the donation in the system is simple and easy, anyone can do it, there is no need to call the associations and ask if they need a donation, just post and the associations will already know that there is food to donate.
The system keeps information on the donations of large organizations, whether the donation was collected or thrown away, how many donations were collected, the amount of food donated or thrown away, etc.

1.1.2 A small donation

Our system also allows small organizations such as neighborhood grocers, restaurants, and cafes to become donors, every day food is thrown away by small organizations in quantities not as large as large organizations, but the accumulation of hundreds of such businesses accumulates to large amounts.
But unlike large organizations, yes those in need are private individuals who can look for a donation in their area of residence according to their choice of distance from their home.
The details of those in need are not published and there is no way for the small organization to know who the needy is, the needy goes to the place where the donation is and can take according to his wish.
Small businesses such as grocers can advertise fresh vegetables and fruits that are left at the end of the day and that the next day will not be suitable for sale instead of throwing them in the trash, restaurants can advertise dishes or surplus food left after the restaurant closes and also cafes, bakeries can donate baked goods left at the end of the day and not bought.
This way you can save a lot of surplus food and donate to people who cannot always afford to eat fruits and vegetables.
The publication of the donation is done in a simple and efficient way and the search for the donation by the person in need is also done in a simple way.
It is possible for the person in need to receive notifications about donations according to the settings he defined.
The shortage of time and manpower in small businesses is greater than in large businesses where hundreds of employees work, they have no way to manage their donations, therefore the system gives them a convenient and available solution to advertise small donations of food of any kind to private individuals who live in the vicinity of the business and thus help those in need who are not always can buy fresh food.
In an interview we conducted with one of the needy who visited the association we toured, she said that she would be happy if there was a system where she could see food donations in her area of residence, thus she would not waste time or feel uncomfortable asking businesses if they have food to donate, the system will direct them to those A business that has a donation.
Sights of people walking around markets or commercial areas looking for food are familiar to all of us, the system can prevent this by posting donations with exact location

Project's stakeholder-

The potential stakeholders of our system are:

- **Large organizations**
- **Associations**
- **Small organizations**
- **Private needy**

Donations are made using old methods where an organization that wants to donate contacts an association by phone and informs it of excess food, sometimes the association does not collect food that day and then the organization must check with other relevant associations or throw the excess food in the trash.
It sometimes happens that associations are the ones who make contact with large organizations, but again the work is cumbersome requiring making telephone calls to dozens of organizations wasting time and manpower.
Dealing with the donation causes large organizations to avoid donating food, one can understand the organization that does not always have the time to deal with surplus food every day and find out if there is an association that needs it or not.
The system simplifies the publication of the donation, it contains many details such as types of food, quantities, whether the food needs refrigeration, whether there is also fresh food added to the donation such as: pastries, vegetables and fruits and the time of food collection.
The publication reaches many associations and the organization does not depend on a specific association.
From an interview we conducted with a representative of one of the largest nonprofits in Israel, we were told that there is no system that organizes all the donations, and that the organization has to call or go to industrial areas to find out about surplus food, of course this wastes precious time and fuel, even if the nonprofit has organizations that donate to it, it still has to proactively inquire Every day there is surplus food for donation.
Using the system will also allow non-profit organizations to receive donations from organizations that did not contribute or had no contact with them, thus increasing the amount of meals provided to those in need.
Also, the association will not be dependent on one organization and will have the option of receiving donations from different organizations.

1.1.3 Preventing food waste

Every year the news reports about huge amounts of food being thrown away in the past year.
For example, in 2021, 2.6 tons of foods worth NIS 21 billion were thrown away in Israel
These amounts increase every year when in 2020 2.5 tons of food were thrown away.
According to experts, at least half of the amount can be saved, since edible food is thrown away.
Apart from the enormous environmental damage caused by the throwing of the food, the thrown food can solve or at least reduce Israel's nutritional problems, since hundreds of thousands of people do not have the ability to provide themselves with a warm aroma or to eat fresh food.

1.1.4 "Azlot Ha'emek" Event Hall

Large event halls with 3 complexes, hundreds of people are hosted every evening.
In a conversation with the owner, he would like to have a system that would centralize all donations, so that it would be possible to publish donations with all the details and to streamline the entire process.

Today, the business donates food but not in an orderly manner and many times edible food is thrown away, because no association was found or the association could not come to collect the food and since this requires busy searching many times the business gives up donating and it is thrown away.

1.1.5 "Latt" association

An association that provides meals to thousands of people a day and also provides food baskets at a cheap price.
The association collects food in many ways but not through an organized system.

1.1.6 "Shemo" confectioner

A chain of small neighborhood bakeries that at the end of a business day is left with a lot of excess food that is thrown away many times due to the inability to donate the food in an orderly manner, the manager of the chain agreed that a system in which he could post every day about excess food would help him prevent food from being thrown away on the one hand and on the other hand he would be able to place the food is near the business but not in the business itself, thus people will be able to come without fear of being exposed and it will not interfere with the business's work.

1.1.7 Private needy (anonymous)

Volunteers in an association and is also in need herself. Agrees, an organized system will help her and people like her to collect food from small businesses without feeling unpleasant and save time in searching between businesses.

2. Project review and process description

2.1. Description of project achievements

Our goal in the project was to help large organizations and associations that provide food donations and hot meals for the needy to allow them to donate food on the one hand from the donors and on the other hand to help those who want the donations, to streamline the entire process and to get large organizations to donate their excess food and not throw it away.
We also decided to connect small businesses such as neighborhood restaurants, coffee shops and neighborhood supermarkets to donate their surplus food to people who live in the vicinity of the businesses.
Every year 2.6 million tons of edible food are thrown away in Israel.

2.1.1 Large organization user

When a large organization enters the site, it has several options:
Adding a new donation, updating an existing donation and deleting a donation.

Adding a donation:

When adding a donation, the user - a large organization - enters the name of the food, for example: meat or fish, quantity and type of unit.
After the user finishes entering all the food into the report, he can choose an association in his city to send an email notification that a donation is waiting for it, or choose not to select a specific association and then a notification will be sent by email to all the relevant associations.
While adding a donation, the user can choose one or more contacts who will be the one to handle the donation and the association will be able to see who the contacts for the donation are and their phone numbers.

Donation update:

The user to update a contribution: delete food, update quantities, add new food. Update or select an association to send the donation to, update contacts to handle the donation.

Deleting a donation:

If the donation is no longer relevant for various reasons or an association has collected the food, the user can delete the donation and it will go to deleted donations.
At the time of deletion, the user indicates the reason for deletion, whether the donation was delivered and, if so, which association collected it or whether it was thrown away.
The user can add, delete and update contacts to handle donations in the organization.

Small Organization User2.1.2

A small organization can be a grocery store, a restaurant, a cafe, a bakery, and more.
A small organization can contribute directly to those in need

Adding a donation:
A small organization can post a new donation, entering food types, amounts and measure type.
When publishing the donation, the organization can upload a photo of the donated food.
When the donation is published, all the relevant needy receive an e-mail notification about the publication of the donation.
Donation update:
A small organization can update a donation if necessary, add food, remove food, update quantities**.**
Deleting a donation:
A small organization can delete a contribution if it is no longer relevant.
Adding contacts:
A small organization can add contacts if needed.
Also delete or update them.

2.1.3Association User

Confirmation of receiving a donation:
When a large organization marks the association, the donation is linked to the association and it can see it on the home page.
The association can make contact by displaying contacts associated with the donation for the purpose of ascertaining details.
Also, an association can refuse to accept a donation and then a message will be sent to the donor and he can choose another association or the system will automatically send a message to all the relevant associations
Adding contacts:
Like a large organization and a small organization, an association can also add contacts in order to have conversations with the relevant parties.
An association can add, update and delete contacts.
Large organizations will be able to see the contact list of each association separately
Donation search:
An association can search for a donation proactively, by a free city search or by a list of cities that have donations.
In addition, an association can see all donations in all cities or see only donations sent to it.
During the search, the association can see the types of food in the donation and see the contacts relevant to the donation
Marking and unmarking a donation:
An association can mark or unmark donations, if an association unmarks an email message is sent to the donating organization and he can choose another association or let the system send a message to the relevant associations
If an association marked a donation, another association cannot mark it at the same time.

2.1.4 Needy User

A private person in need can do an operation of searching for a donation.

Donation search:

On the home page, the person in need can search for a donation in a free search or by a list of cities where there are donations.

When a donation is posted by a small organization, the person in need receives an email notification of a new donation being posted.

On the home page the person in need can see the location of the donation, see the details of the donation, and view the image of the donation**.**

2.1.5 Automatic actions in the system

Our system has actions that are done automatically:

When a donation is published, a notification is sent to the emails of the relevant users.

Donations from large organizations are automatically deleted 48 hours after they are published.

Donations from small organizations are automatically deleted after 5 hours.

When an association marks or unmarks a donation, the system sends a message to the relevant users.

By these actions we try to ensure that no donation is lost, for example if an association to which a donation was sent cancels the check, and the donating organization does not select a new association, the system will send a message that a donation will be available to all other associations.

2.2 What we used to build the Donations website

2.2.1 Front-End:

JavaScript:

JavaScript is a high-level programming language that enables interactivity and dynamic functionality on websites.

It is widely used for both front-end and back-end web development.

JavaScript allows developers to manipulate and control various elements of a web page, handle user interactions, and communicate with servers to retrieve and update data**.**

Html 5:

HTML5 is the latest version of Hypertext Markup Language, which is the standard markup language for creating web pages.

It provides a structured way to define the content and layout of a web page, including text, images, links, headings, tables, and more.

HTML5 introduced new features and elements that enhance the capabilities of web applications, such as native audio and video support, canvas for drawing graphics, local storage, and improved form controls.

CSS:

CSS (Cascading Style Sheets) is a style sheet language used for describing the presentation and appearance of a document written in HTML or XML.

CSS allows developers to define the visual aspects of a web page, including colors, fonts, layouts, and animations.

It separates the content from its presentation, making it easier to maintain and update the design of a website.

Summary- client side

In combination, JavaScript, HTML5, and CSS form the core technologies for building modern web applications.
JavaScript provides interactivity and dynamic behavior, HTML5 structures the content and layout of the page, and CSS styles and enhances the visual presentation.
Together, these technologies enable developers to create rich, responsive, and engaging web experiences for users.

2.2.2 Back-End:

Node.js:

Node.js is a single-threaded, open-source, cross-platform runtime environment for building fast and scalable server-side and networking applications. It runs on the V8 JavaScript runtime engine, and it uses event-driven, non-blocking I/O architecture, which makes it efficient and suitable for real-time applications.

Express.js:

Express.js, is a back-end web application framework for building RESTful APIs with Node.js, released as free and open-source software under the MIT License. It is designed for building web applications and APIs.

2.2.3 Database:

MongoDB:

MongoDB Is a source-available cross-platform document-oriented database program. Classified as a NoSQL database program. MongoDB uses JSON documents with optional schemas. It supports field, range query, and regular expression searches. Queries can return specific fields of documents and include JavaScript functions that the user defined, it can also be configured to return a random sample of results of a given size. MongoDB provides high availability with replica sets. A replica set consists of two or more copies of the data. Each replica-set member may act in the role of primary or secondary replica at any time.
All writes and reads are done on the primary replica by default. Secondary replicas maintain a copy of the data of the primary using built-in replication.
When a primary replica fails, the replica set automatically conducts an election process to determine which secondary should become the primary.
Secondaries can optionally serve read operations, but that data is only eventually consistent by default

2.2.4 Agile Development:

For the development stage, we had to choose the most suitable software development methodology for our project.
We have researched and analyzed a couple of project development methodologies such as Agile and Waterfall. our conclusion is that Agile is the most appropriate development methodology for our project.

Agile methodology is an iterative approach to project management and software development, which breaks down projects into small pieces. These project pieces are completed in work sessions that are often called sprints.
Sprints run anywhere from a few days to a few weeks.
These sessions run from the initial design phase to testing and quality assurance (QA).
The main benefit of Agile development methodology lies in the flexible approach to product development, the development team are responsive to changes, even at the last minute, and can adapt to it without much disruption.
Hence, the use of the Agile methodology will allow us to release an initial version of the system.

2.2.5 Why did we choose these development languages

We chose to work with these languages for several reasons
We had no knowledge of web development languages and we thought what would be the easiest to learn and work with and that has flexibility and an extensive source of knowledge on the web.
On the client side, we chose the basis of all web programming languages HTML and JavaScript. Languages like REACT and Angular are based on JavaScript, so it is important to have a solid knowledge of this language in order to learn other languages this knowledge.
Also, in these languages it is possible to build a website that is easy to operate since one of our goals was to make the system accessible so that organizations would donate and not hesitate to donate due to a complex system.
On the server side we chose Node.js with express to manage the database efficiently by sending requests and returning queries
Node.js is written in JavaScript so it is a preferred choice and there is a lot of information on the Internet.
that can be learned, of course we encountered difficulties and technical problems but using this language allowed us to develop very quickly
Regarding the database, we chose mongoDB to manage our database, it is a very common database that also enables fast and efficient development.

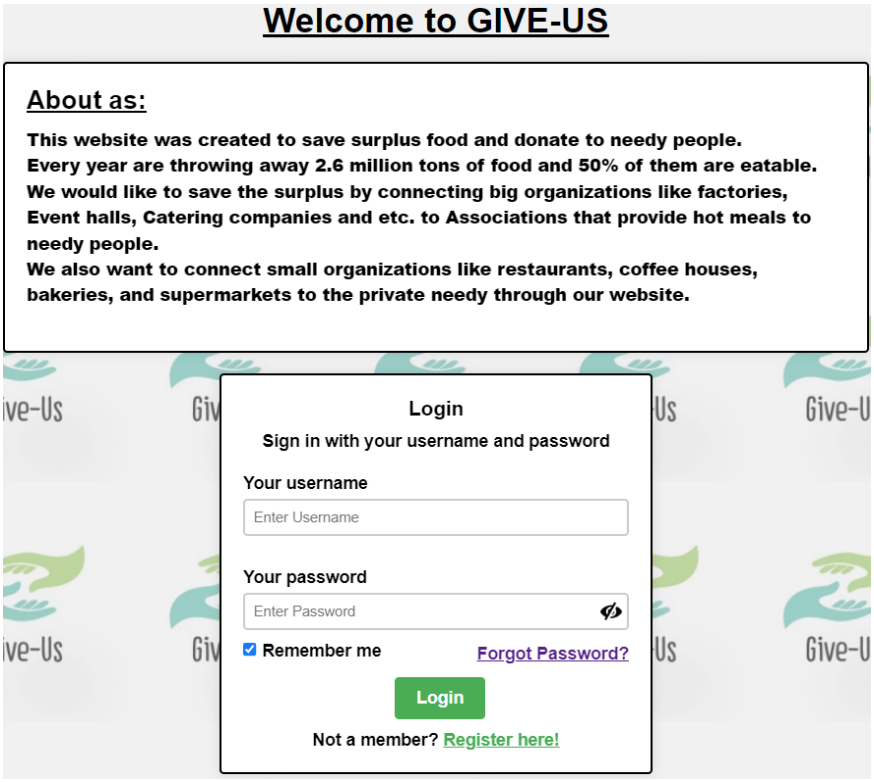
3. Expected Achievements

We initially decided to create the application with a MEAN stack architecture
After a functioning server, we moved to the client side and faced many UI issues
A lot of work was required to create a system that would work both as an application and as a website, but unfortunately, we realized that it would be difficult to achieve this in a short time of a semester, so we focused on the development of a website that would meet the needs that we stated in advance
After several weeks of study, we decided to focus on JavaScript, html and CSS.
The study material is very abundant and it is easy to build an efficient website that functions quickly and easily
Also, we chose these programming languages to learn the basics of the web development world
In the beginning we built all the logic of the client side, screens, home pages, main entry page and so on
We divided the project into 5 parts on the client side: general, large organization, small organization, association and needy
We divided the work so that we could move forward at the same time
After we prepared all the logic of the client side, we started to build the server, here too we encountered problems connecting to a database and how to even write queries
Again, we started learning node.js from the basics and started writing all the schemas. We divided the server into folders to make it convenient to work: users, active contributions, deleted contributions, contacts, pictures of a contribution, password recovery with a token and sending notifications
Of course, we had to know how to send email notifications to users, we wanted the system to do things automatically as much as possible to make it easier for users
For example, when a donation is created, the system sends a message to the relevant users
If there is a donation update as well, or if the donor has decided to send a donation to a specific association
The last challenge was working with GitHub. This was the first time we had a repository and operated at the same time. The parallel work was great, we divided the work in a non-blocking way, and the integration was also easy. The problem was using git and making sure we were always in sync. In the end, we learned a lot about working with git, and that, without a doubt, made our work together much easier than it could have been
The goal, as we stated, was to create a website that would make organizations and small businesses donate excess food, from the research we did, many organizations prefer not to mess with it and throw away edible food, this both harms the environment and wastes a lot of money

Therefore, the goal was to create a convenient website that would manage this whole sensitive issue

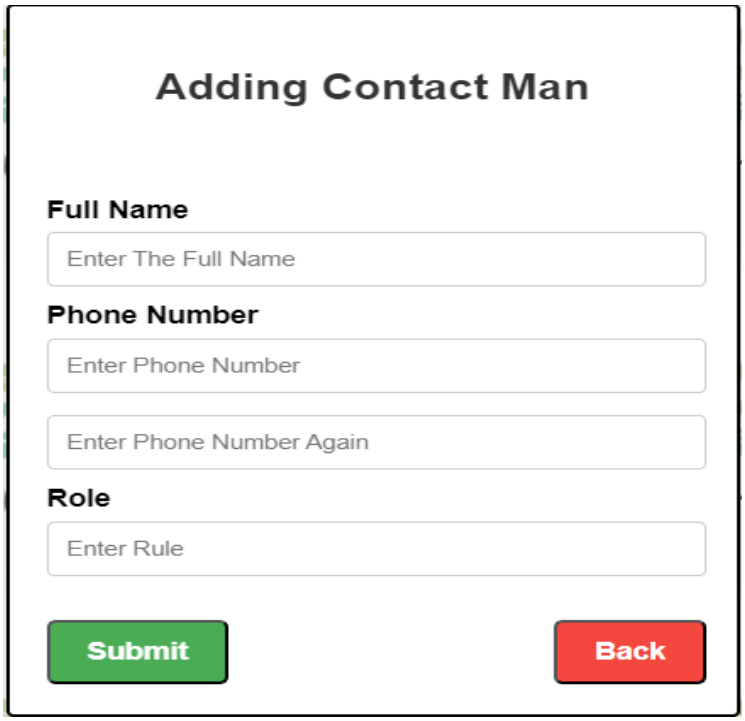
4. User Documentation

4.1 The home page of the system

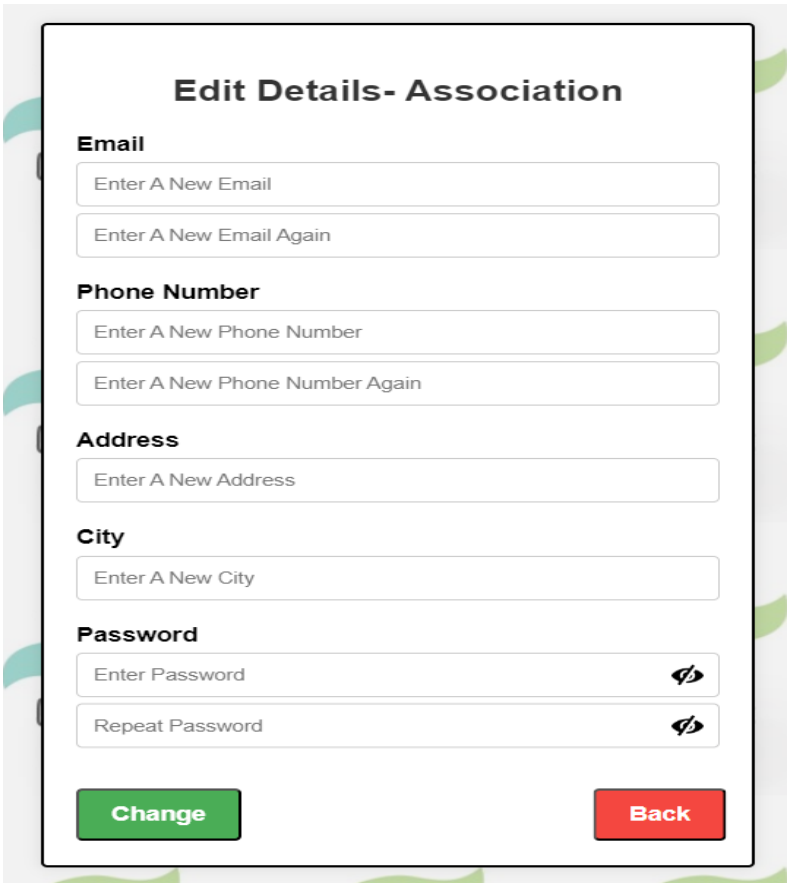


4.2 Registration to the site- in this case an association, but it is the same for all users

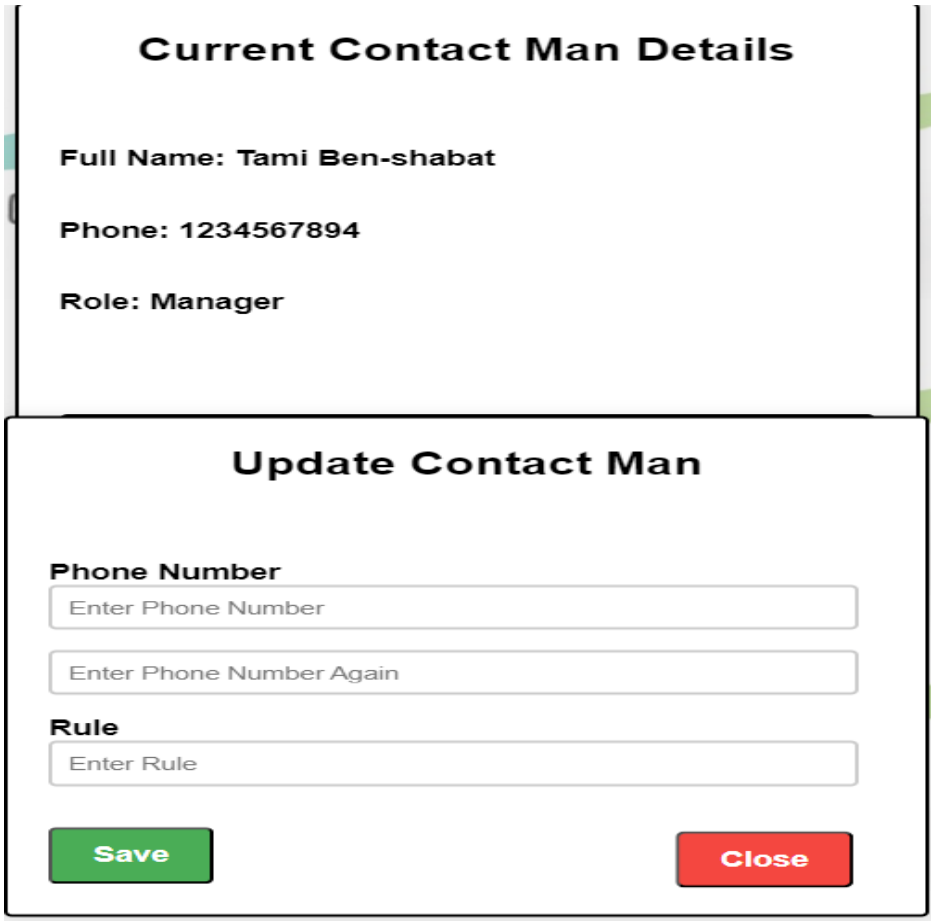
4.3 Added a contact



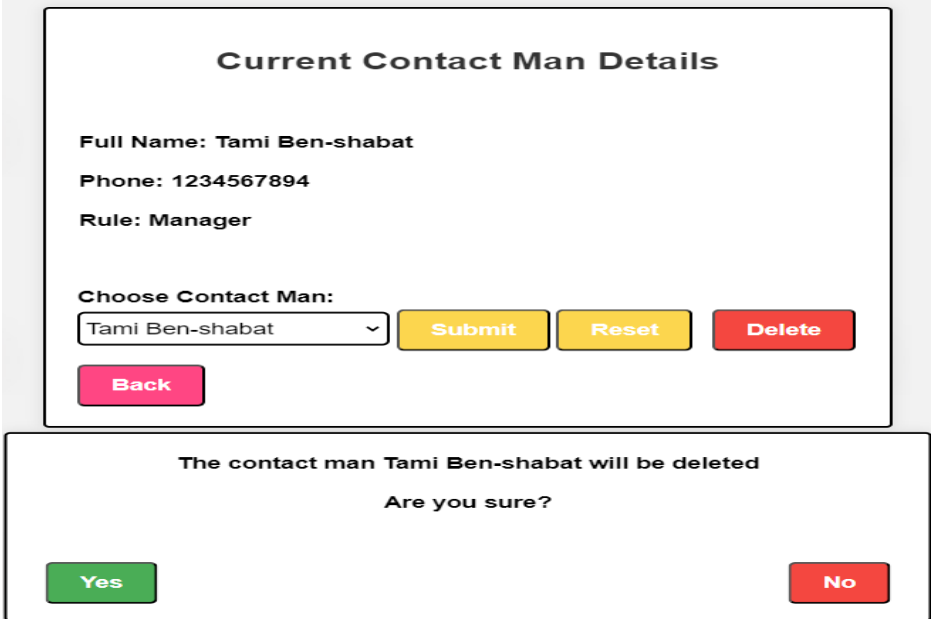
4.4 Update user details



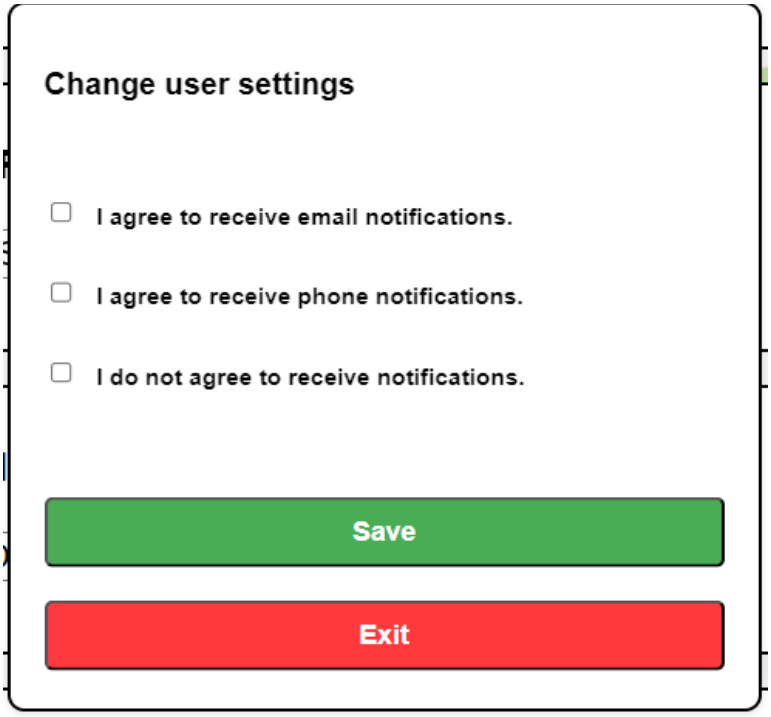
4.5 Contact update



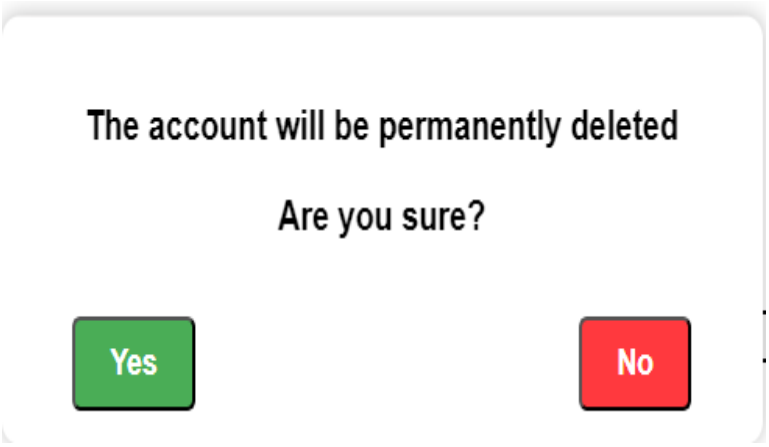
4.6 Deleting a contact



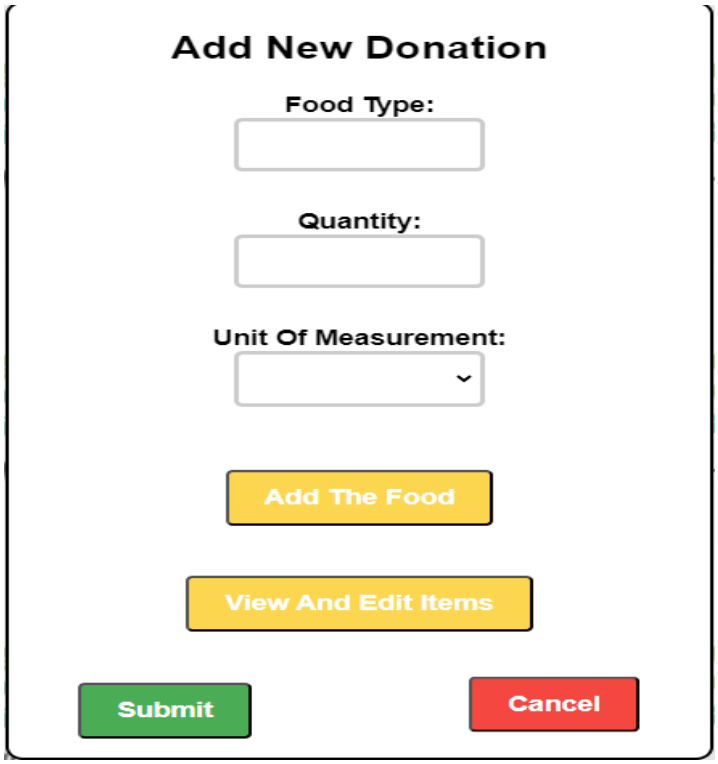
4.7 Update regarding receiving notifications



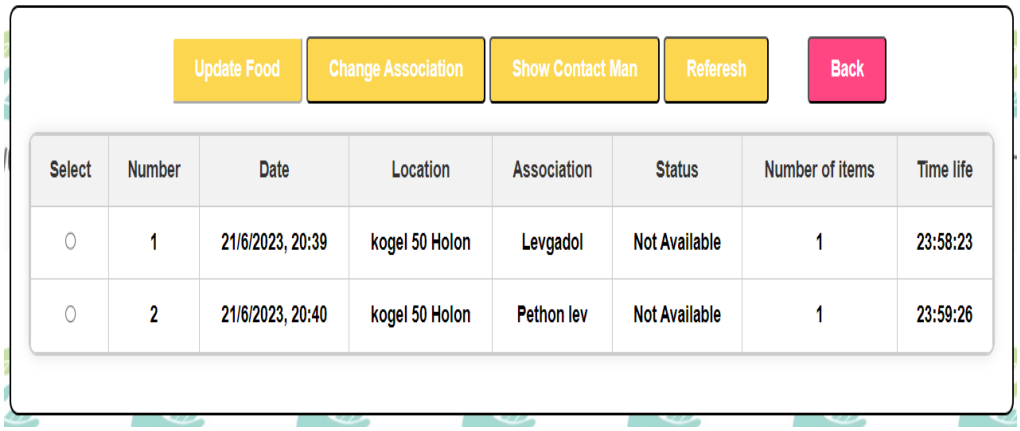
4.8 Delete account



4.9 Adding a new donation

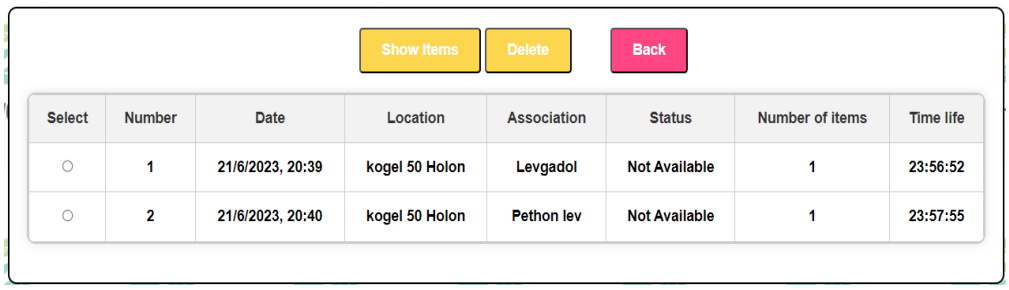


4.1 Donation update



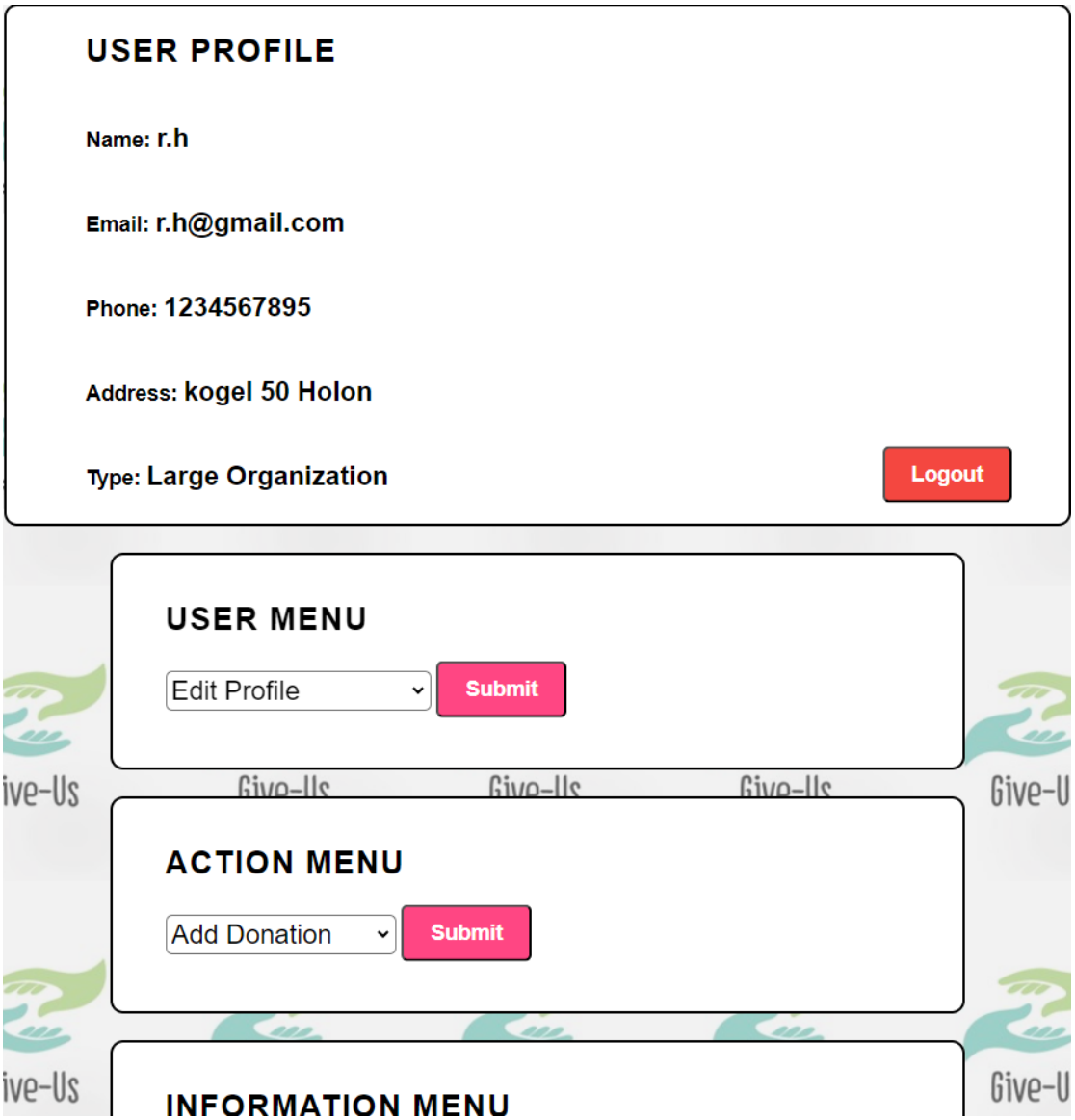
Select	Number	Date	Location	Association	Status	Number of items	Time life
○	1	21/6/2023, 20:39	kogel 50 Holon	Levgadol	Not Available	1	23:58:23
○	2	21/6/2023, 20:40	kogel 50 Holon	Pethon lev	Not Available	1	23:59:26

4.11 Deleting a donation

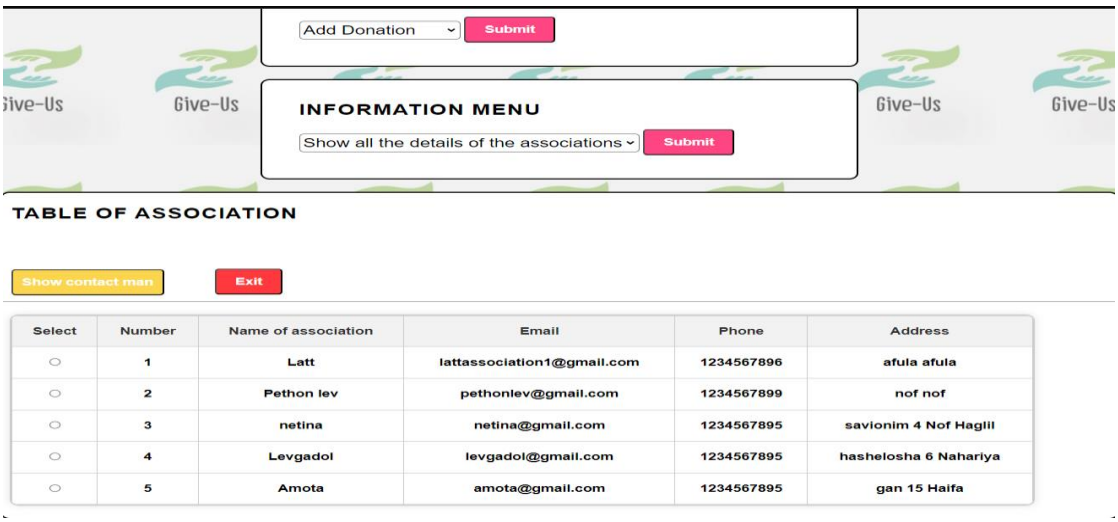


Select	Number	Date	Location	Association	Status	Number of items	Time life
○	1	21/6/2023, 20:39	kogel 50 Holon	Levgadol	Not Available	1	23:56:52
○	2	21/6/2023, 20:40	kogel 50 Holon	Pethon lev	Not Available	1	23:57:55

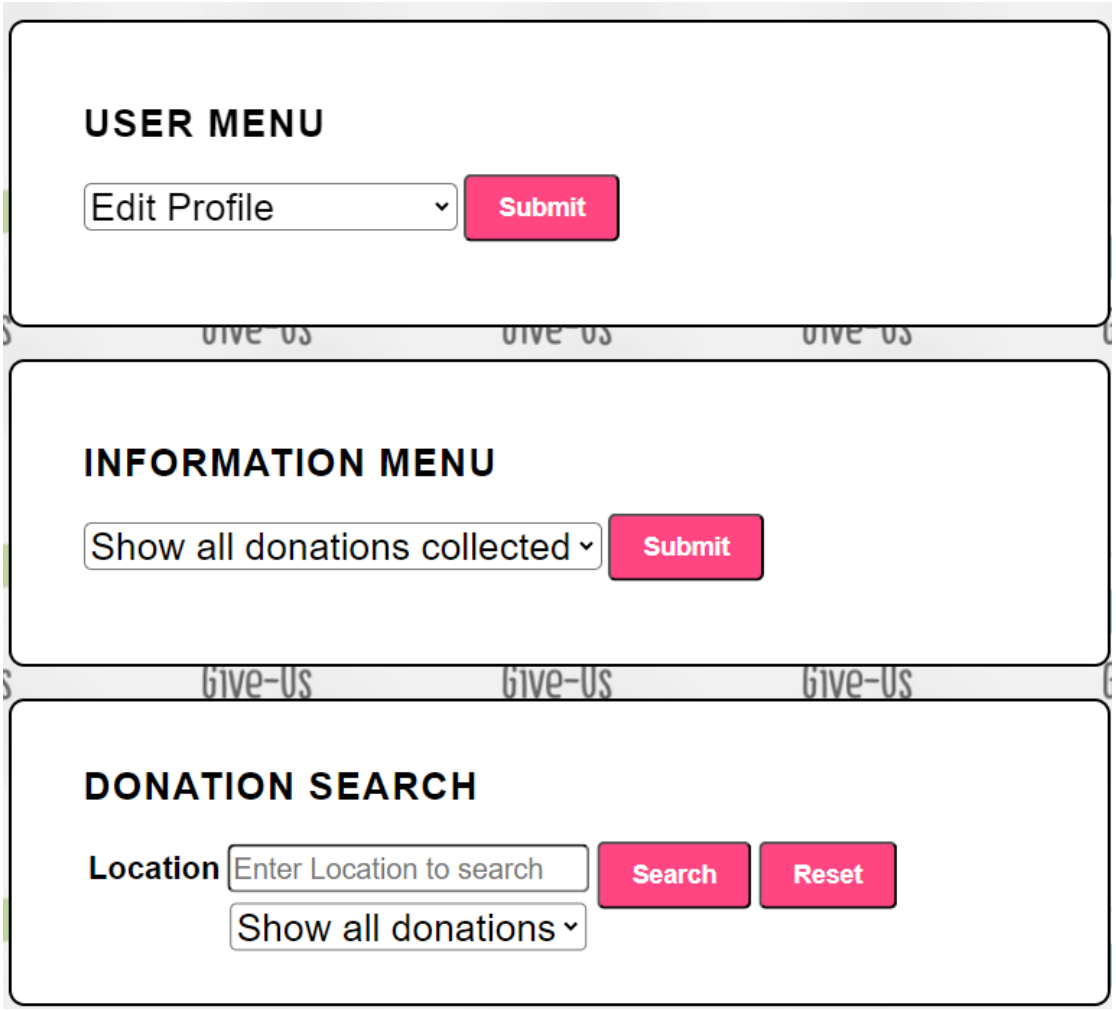
4.12 Large organization home screen



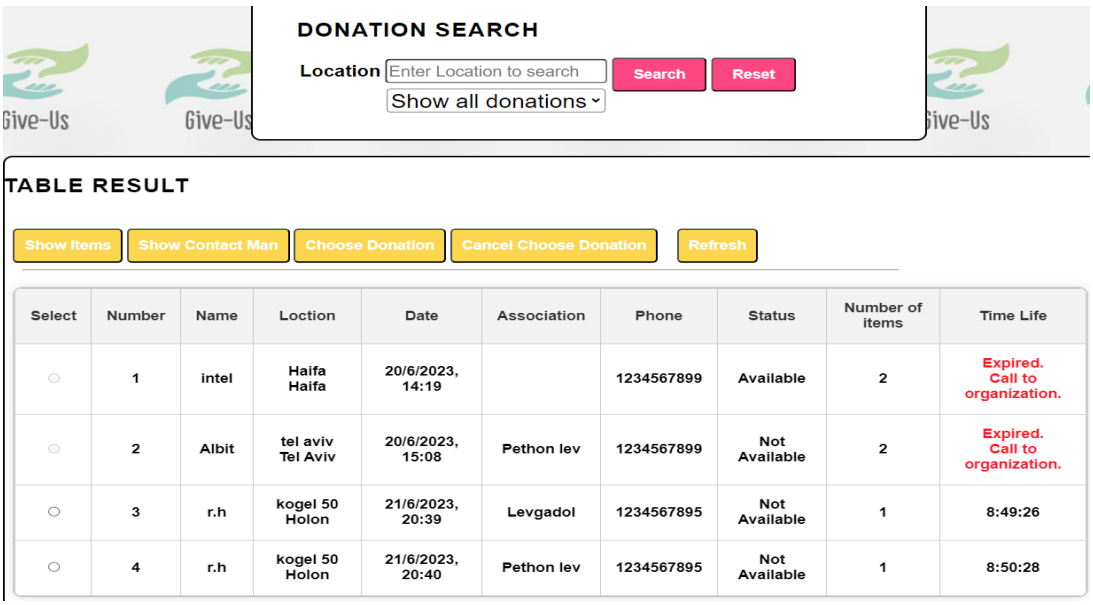
4.13 Large organization home screen



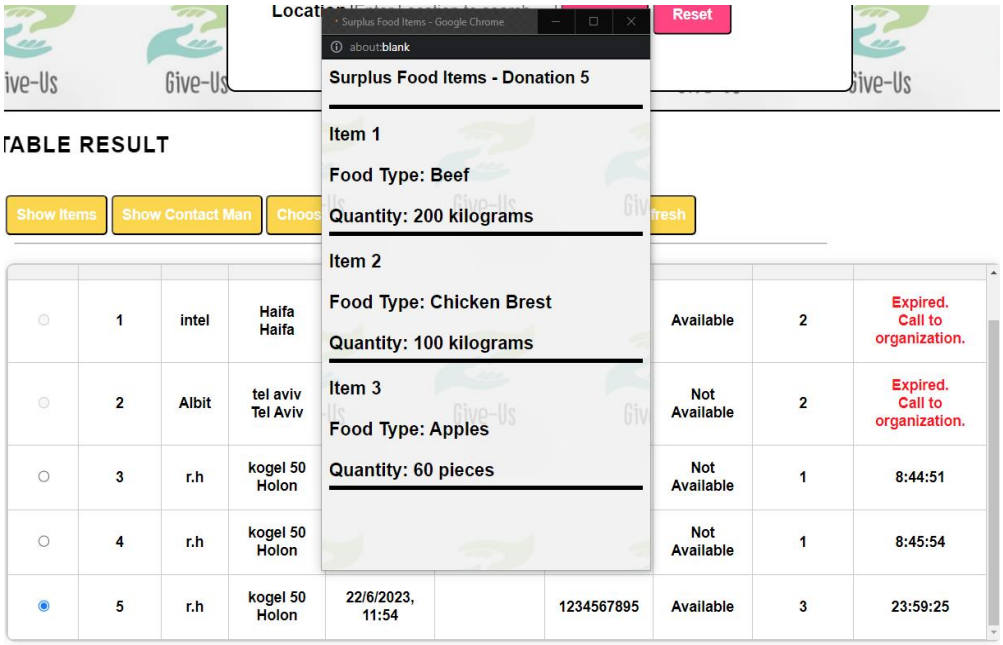
4.14 Search for a donation- an association



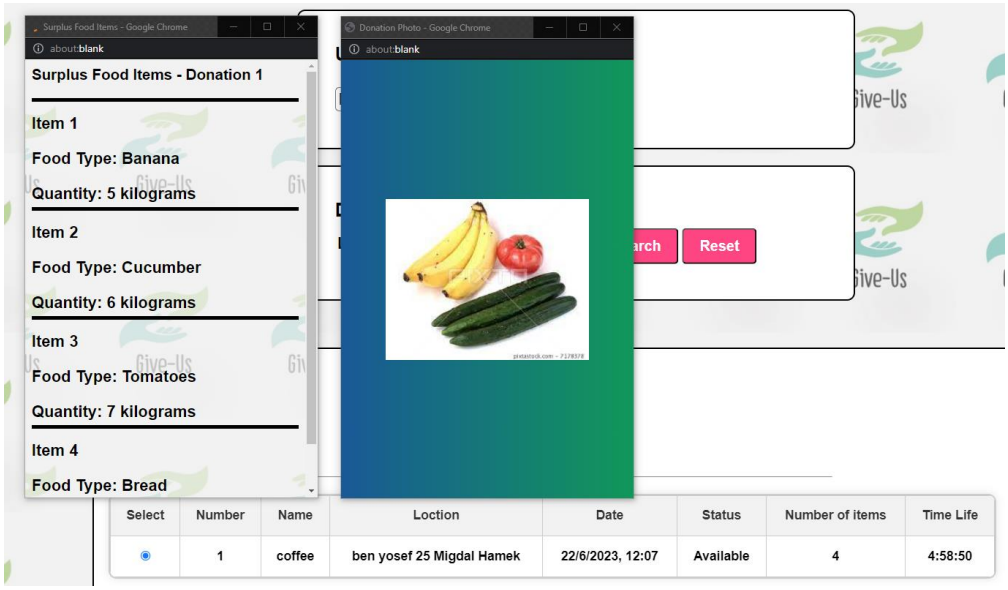
4.15 Donation search results



4.16 The donation items



4.17 Picture and items of donation



5. The Process

5.1. Diagrams

5.1.1Use-case Diagram

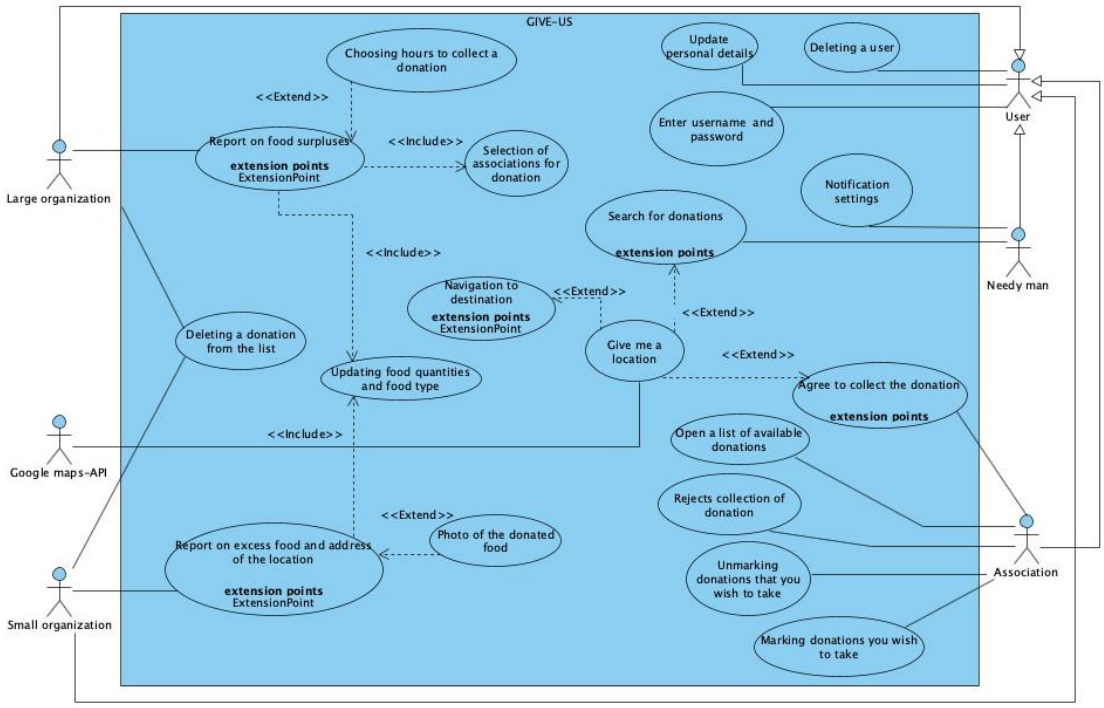


Fig 1: Use Case Diagram

5.1.2 Class Diagram

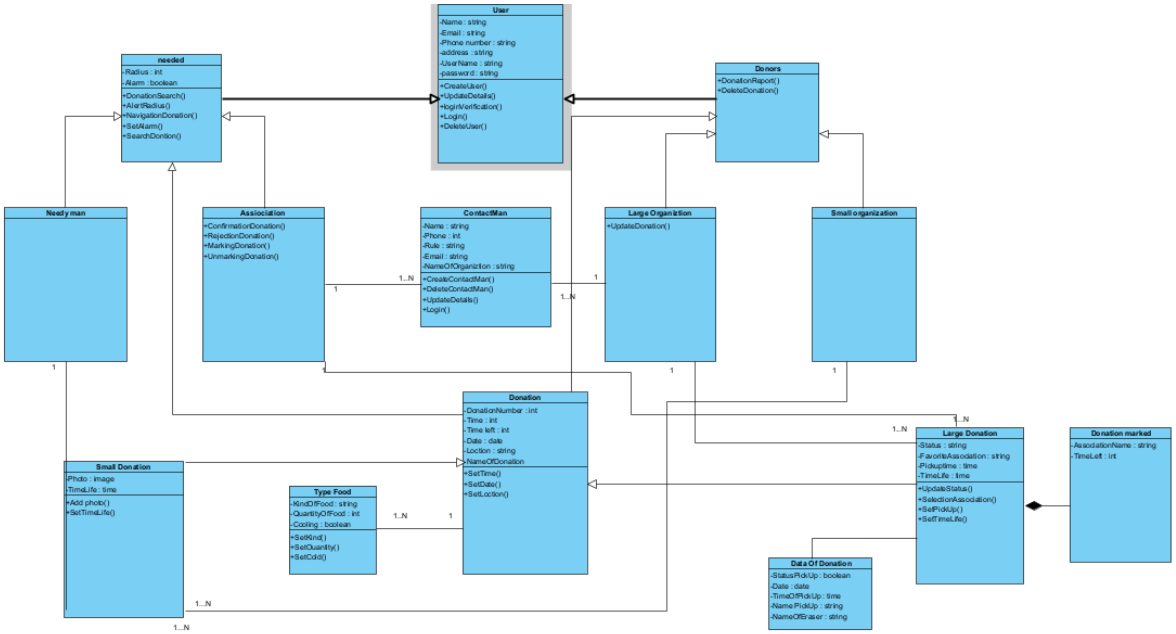


Fig 2: Class Diagram

5.1.3 Activity Diagram

Reporting Big organization

Guide of a large donation of a large organization

1. **The large organization reports a new donation.**
2. **The large organization chooses the type of food and the amount of food.**
3. **If the large organization decides that the food does not require refrigeration then they move to step 5.**
4. **The large organization marks the food that requires refrigeration.**
5. **If the large organization wants to add more food, go back to step 2.**
6. **The system adding a donation to the list.**
7. **If the large organization chooses a favorite association, proceed to step 9.**
8. **The system sends notifications to the relevant associations and finishes the process.**
9. **The large organization chooses a specific association.**
10. **If the association does not approve the donation, return to step 7.**
11. **The association approves the donation.**
12. **The system marking a donation in red - currently unavailable.**
13. **The system sends a notification to the donor - the donation has been marked.**
14. **The system opens a time window for collection**

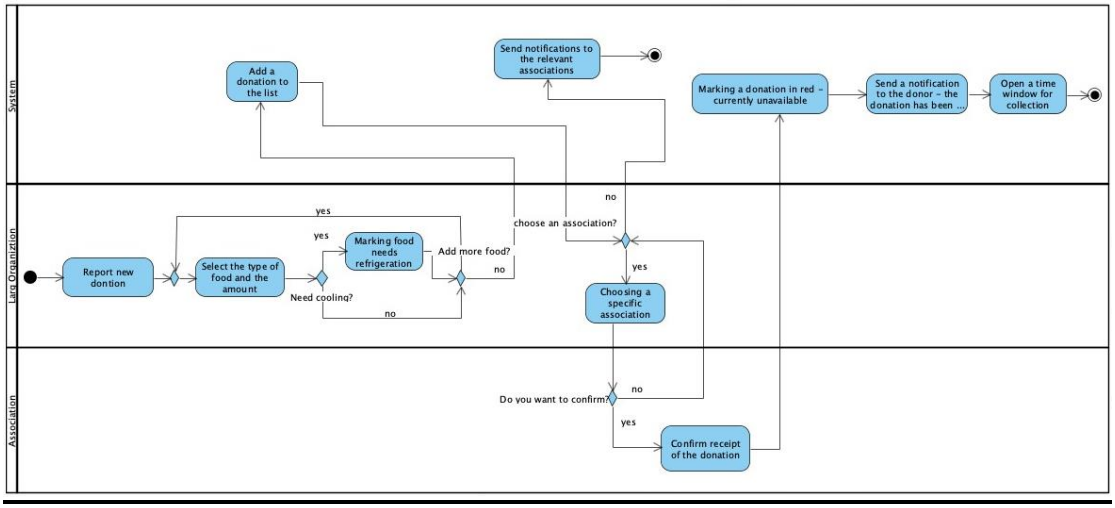


Fig 3: large donation of a large organization Activity Diagram

Reporting Small organization

Guide of a small donation of a small organization

1. **The small organization reports a new donation.**
2. **The small organization chooses the type of food and the amount of food.**
3. **If the small organization chooses to add a photo, it continues to step 5.**
4. **The small organization adds a photo.**
5. **If the small organization wants to add another donation, it returns to step 2.**
6. **The small organization chooses a location to collect the donation.**
7. **If the small organization chooses not to add time, it moves to step 9.**
8. **The small organization adds collection time to the donation data.**
9. **The system Run a lifetime donation.**
10. **The system adding a donation to the list.**
11. **The system Sending messages to those in need.**

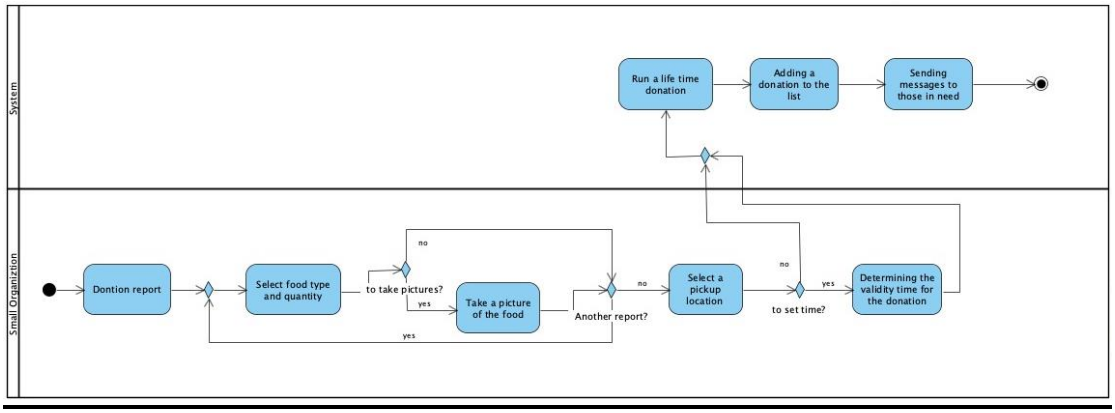


Fig 4: small donation of a small organization Activity Diagram

Search donation

guide to finding a donation:

1. **The association clicks a search button.**
2. **The system displays all available contributions.**
3. **Did you find a relevant contribution? Yes/no**
4. **Yes, Mark the donation. (Jump to number 8).**
5. **No, would you like to do another search? Yes/no**
6. **Yes, return to step 1.**
7. **No, end of donation search.**
8. **The system will mark the donation as unavailable.**
9. **The system will open a time window.**
10. **The system will send a message to the donor about it.**
11. **Would you like to search for another donation? Yes/no**
12. **Yes, return to step 1.**
13. **No, end of donation search.**

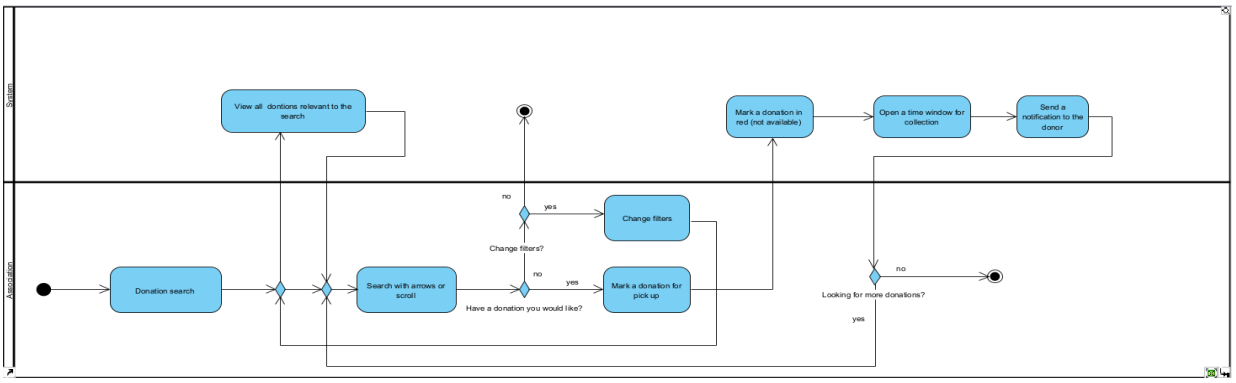


Fig 5: Search donation Activity Diagram

6. Testing

In our system there are two types of tests: manual test and automatic test

For manual testing, human testers interact with the application, following predefined test scenarios.

They manually enter data, perform operations, and compare results to expected results. Manual testing allows flexibility in exploring different use cases, but may be time-consuming and prone to human error.

On the other hand, we use automated testing using tools and scripts to automatically execute test cases. Automated tests simulate user interactions and validate the output against the expected results.

By combining manual and automated testing, we achieve comprehensive coverage and efficient validation of our system.

1.	Login		
	Test Subject	Expected result	Result
1.1	Username is empty	"Enter username" message on the screen	Successfully passed
1.2	Empty or incorrect password for username	"Wrong password" message on the screen	Successfully passed
1.3	Username does not exist	"Username does not exist in the system" message on the screen	Successfully passed
1.4	User is already logged in	"User is already logged in please check" message on the screen	Successfully passed

2	Registration		
	Test Subject	Expected result	Result
2.1	Incomplete details	"Incomplete details please fill in the one marked with a star" message on the screen and a red mark	Successfully passed
2.2	Invalid email	"Invalid email" message on the screen and a red mark	Successfully passed
2.3	Invalid phone number	“Invalid phone number” message on the screen	Successfully passed
2.4	Username(Email) exists	"Username exists" message on the screen	Successfully passed
2.6	Password too weak	"Weak password" message on the screen	Successfully passed
2.7	Invalid password validation	"Password verification does not match" message on the screen	Successfully passed

3	Adding Contact Man		
	Test Subject	Expected result	Result
3.1	Incomplete details	"Please fill in all fields" message on the screen	Successfully passed
3.2	Invalid role	"Invalid role" message on the screen and a red mark	Successfully passed
3.3	Invalid phone number	“Invalid phone number” message on the screen	Successfully passed

4	Adding large donation		
	Test Subject	Expected result	Result
4.1	Incomplete details	"Missing item information" message on the screen	Successfully passed
4.2	Saving a donation without items	"Insert at least 1 item " message on the screen	Successfully passed
4.3	Select Contacts	"The contacts have been successfully added" message on the screen	Successfully passed
4.4	Choose an association to donate to	"The association was successfully selected" message on the screen	Successfully passed
4.5	Click Save to add a donation	"The donation has been successfully saved" Message on screen	Successfully passed

5	adding small donation		
	Test Subject	Expected result	Result
5.1	Adding an item for donation	"The item was added in success" message on the screen	Successfully passed
5.2	Adding an item without a quantity	"Add quantity to item" message on the screen	Successfully passed
5.3	Adding an item without a unit of measure	"Select a unit of measure" message on the screen	Successfully passed
5.3	Would you like to add a photo?	" Opening a window to add a picture"	Successfully passed
5.4	Uploading a picture	The image has been " successfully added to the donation" message on the screen	Successfully passed

6	Search donations- Association		
	Test Subject	Expected result	Result
6.1	Search for a donation sent to me	Presentation of donations sent to the association The donations are shown in the table	Successfully passed
6.2	Search for a donation by city	Presentation of donations according to the selected city The donations are shown in the table	Successfully passed
6.3	View all donations in the system	View all donations The donations are shown in the table	Successfully passed
6.4	Free donation marking	" The donation has been marked as successful" message on the screen An email has been sent to the donor	Successfully passed
6.5	Marking a donation that is not available	The donation is not available for " collection" message on the screen	Successfully passed
6.6	Show items of the donation	Displaying all the details of the donation	Successfully passed

7	Search donations- Needy		
	Test Subject	Expected result	Result
7.1	Search for a donation by city	Presentation of donations according to the selected city The donations are shown in the table	Successfully passed
7.2	Show items of the donation	Displaying all the details of the donation	Successfully passed
7.3	Show the picture of the donation	Show a picture of the donation	Successfully passed

7. Challenges and solutions

During the development we encountered many challenges.

At first it seemed to be a "simple" system, but as we progressed the system became more and more complex and we had to calculate a route every time.

Also, we have no experience in web development languages, we learned the client-side languages: JavaScript, html and CSS while developing the system, we chose to use these languages to gain experience in the basics of web development, therefore we did not choose REACT or ANGULAR.

We had to create many tables in the database to save a lot of information about donations, users, updating donations, deleting donations, saving information about contacts so that the system is also an information system for organizations and associations.

At first, we kept things basic about contributions and then realized we needed to add more fields, so we changed the schemas all the time during development.

Same with additional schemas we had to change and add fields all the time.

We had to add times and dates to the creation of the donations so that we know when to delete and more fields to make it easier for the user to search for food donations.

Even on the server side, we were constantly learning during development how to write correct queries and access the database to extract the correct information.

During the development we also learned the Node.js language and yes, at first there was difficulty in connecting to the database, we encountered technical problems that caused delays and frustrations.

We also completed knowledge in Internet courses such as Udemy and YouTube to learn how to write code on the server side and, among other things, how to upload an image, download an image, how to send emails to users, how to recover a password using a link to an email, and more.

The client side was not easy either, since we chose JavaScript, HTML and CSS, we were very limited in designing the website, and therefore it was very difficult to achieve a satisfactory and correct design with an emphasis on simplifying the system, which would be as available and accessible as possible, because in the end The goal is to make the donation process as simple as possible.

The use of these languages meant that we wrote many lines of code compared to using another language such as AngularJS or REACT which probably would have saved a lot of code.

We tried to make the system as functional as possible and to provide a proper response to organizations and associations in all matters of food donations

We thought about every detail and how to implement it so that the user has the easiest and most convenient way to use our system to donate food.

There was a difficulty in how to create an automated system that would check if donations have expired or been rejected by the association and make them automatically without the use of users to facilitate them.

But after many efforts we succeeded.

We believe that the system can provide a solution to the field of food donations and help organizations and associations save a lot of food and give it to those who need it.

Also, regarding small organizations that can contribute to the people around them and make their lives a little better and contribute to the environment at the same time.

8. References

An article in the Calcalist newspaper:

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