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2023-2027

OPTIMIZING WASTE MANAGEMENT SYSTEM

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Problem statement

Optimizing Waste Management System.

Proposed solution: Developing an app which links together Companies, Organisations and Individuals to facilitate the donation of surplus food.

Introduction

What is Ecoplatter?

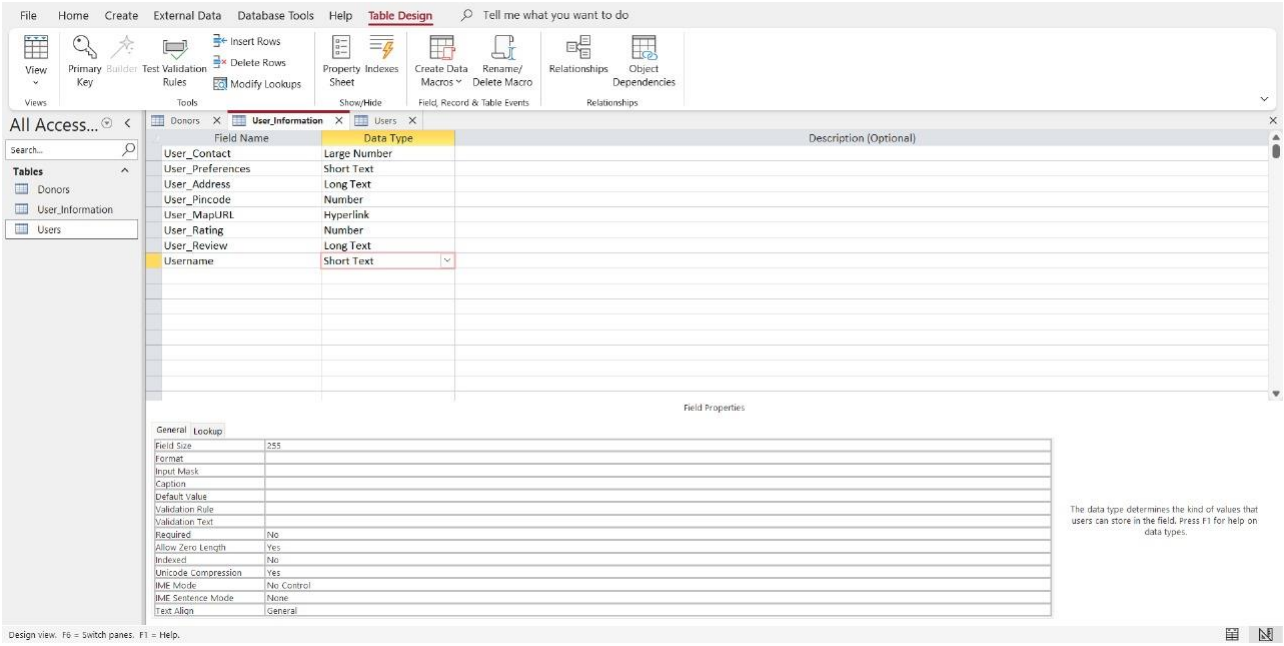
It is a prototype based model that makes direct connection between food donors and those in need of donation, this app was designed with the thought of providing delicious, decent quality and safe to consume food to those who are in serious need of it. Every year according to a 2012 consensus, fast food or big chain restaurants throw away about 12 kilo tons of good quality edible food items. Restaurants waste an average of 4-10% of all the inventory they purchase. And accordingly, every year lakhs of homeless people and orphans die of starvation. An effective solution is to donate the food that was going to be passed on as wastage to these individuals hence solving hunger problems and wastage issues.

The app is designed to be user friendly, featuring in-app messaging, push notifications, and a comprehensive set of food safety guidelines. Furthermore, a user rating and review system promotes community trust, allowing users to provide feedback on their donation or pickup experiences. Scheduling and reminders enhance the coordination of food pickups, while an analytics dashboard provides metrics on successful donations, food waste reduction, and overall community impact. In terms of monetization, the proposed strategies include subscription plans offering premium features, donation fees for businesses and restaurants supporting the platform.

How it was done?

Making of database: MS Access can be used to develop application software and is generally used by data architects, software developers and power users. Excel is a software program created by Microsoft that uses spreadsheets to organize numbers and data with formulas and functions. In Excel, you don't create a traditional relational database like you would in a dedicated database management system (DBMS), but you can organize your data in a structured manner that resembles a simple database table. Formatting the table and making

Distinct row and column heading makes is our team used Microsoft access and excel to make databases given below:



The user registration database and user info database work side by side to update and register when a new user logs in, both these databases are in XML format.

XML file format: An XML file is an extensible markup language file that structures data for storage and transport. In anXML file, there are both tags and text. The tags provide structure to the data. These tags, which adhereto specific syntax guidelines, surround the text in the file that you wish to store.

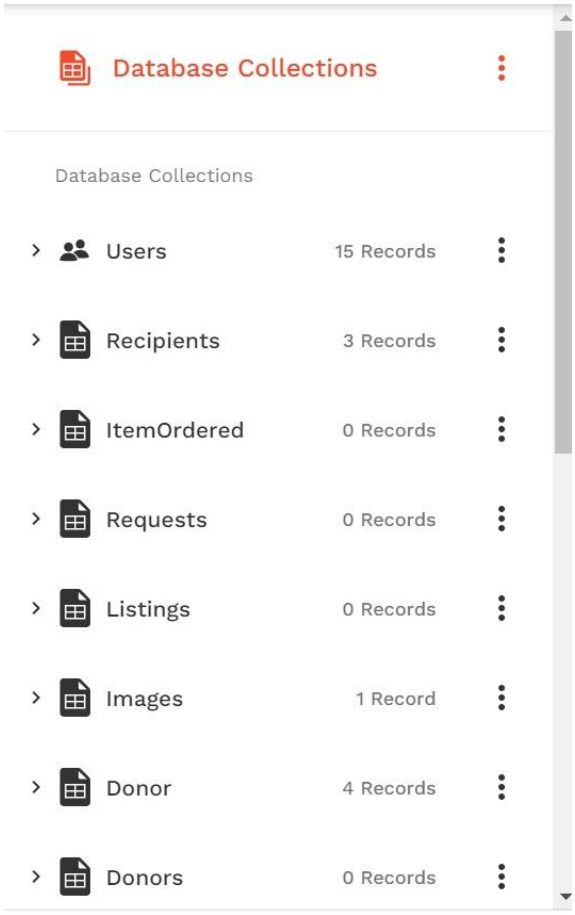
Other databases such as donor items and recipients were written in excel and further coded into the website.

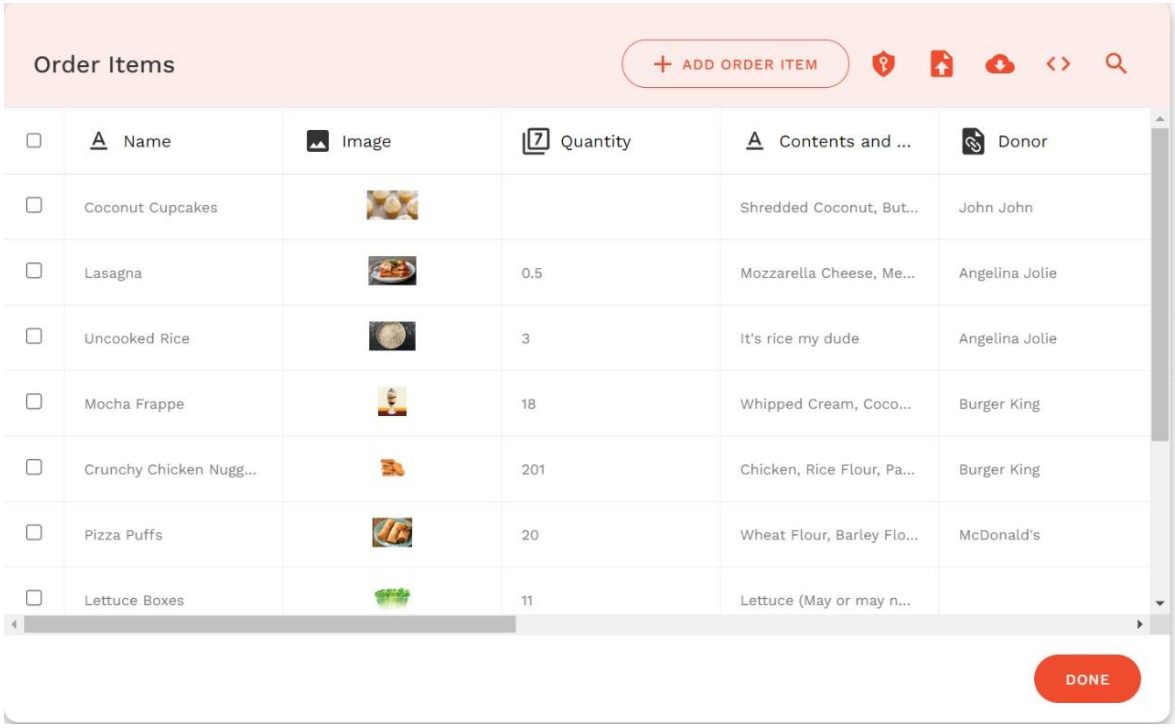
How the Integration is done?

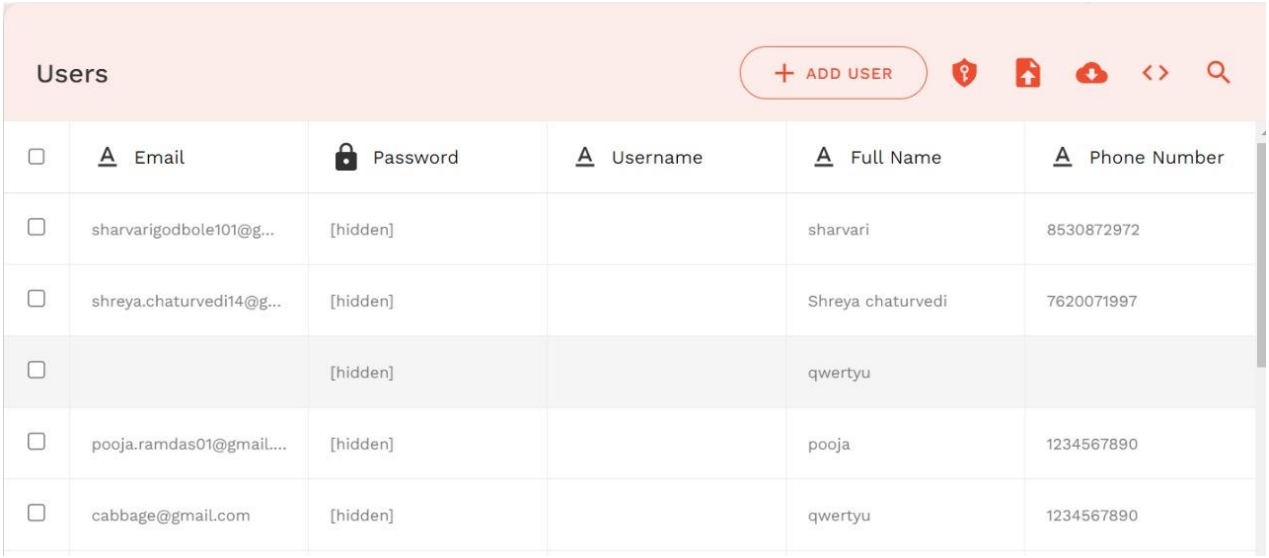
The databases created become a fundamental aspect in the building of the website. The next step is to integrate them into the website. This is where Adalo comes in.

Adalo lets freelancers, creatives and founders publish custom responsive apps for the web and mobile devices. It allows us to build apps on an intuitive drag and drop interface, either by using pre-made design elements or by creating your own. Adalo is designed to be user-friendly, particularly for those who may not have extensive programming skills. Users can create applications through a visual interface, utilizing drag-and-drop components and pre-built templates.

Images of database after integration:

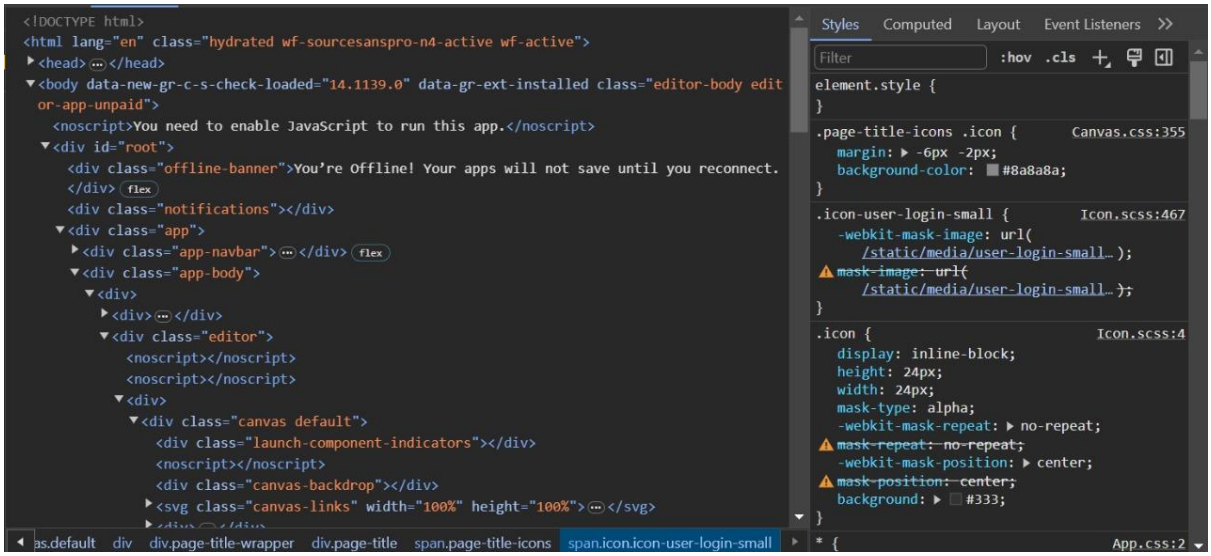


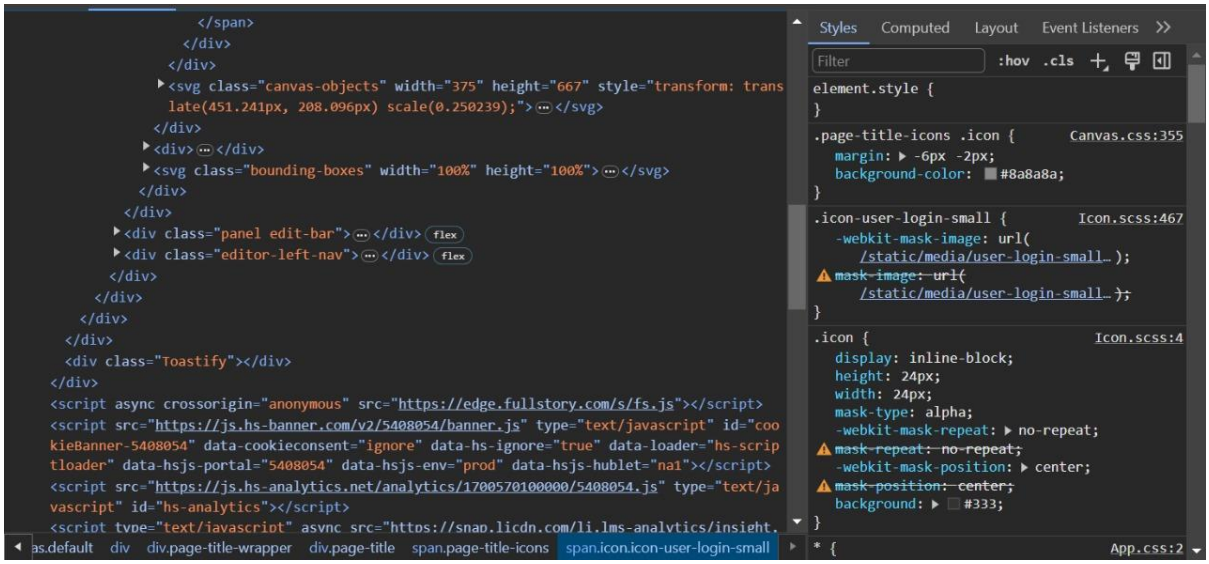


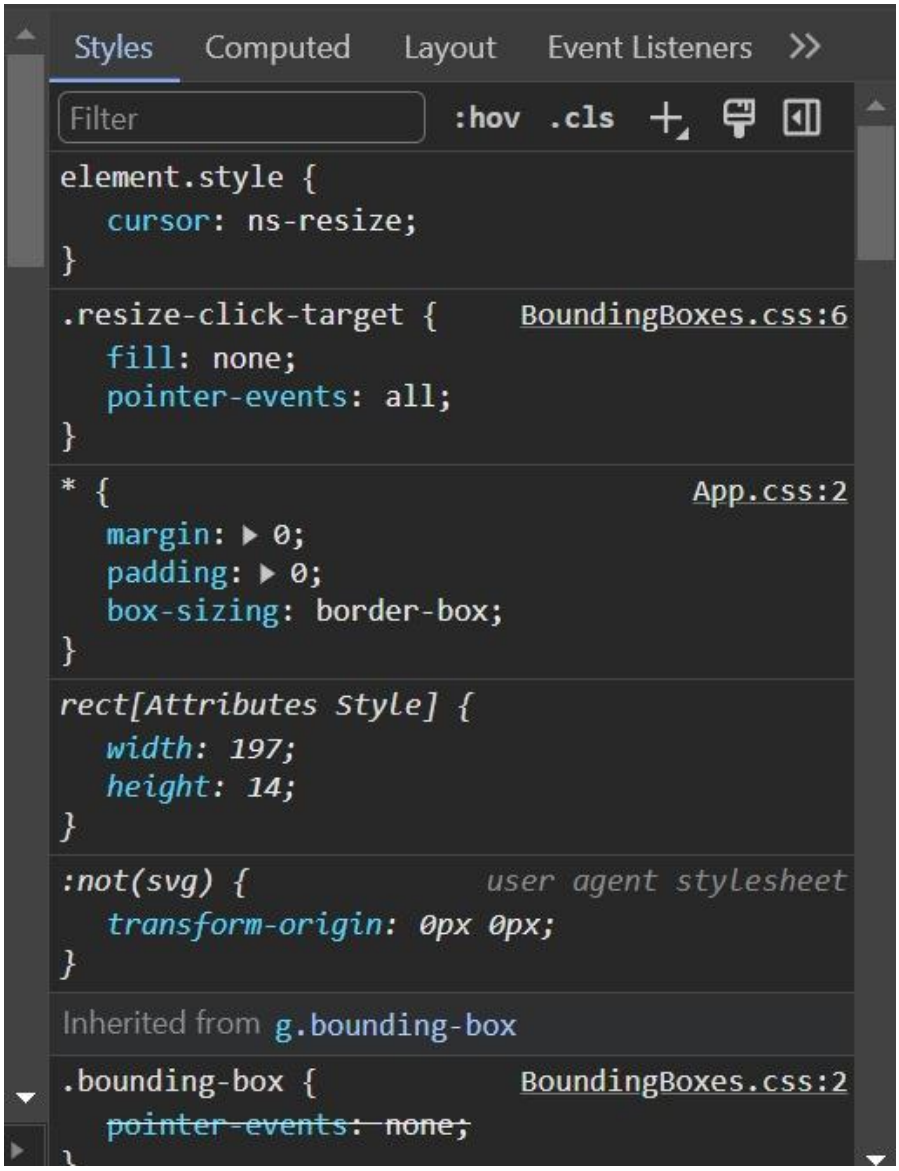


Next, we used canvas in HTML and code from JavaScript to create <canvas> login screen where users are registered in the user database. The HTML <canvas> element is used to draw graphics, on the fly, via scription (usually javascript). The <canvas> element is only a container for graphics. In HTML, <canvas> element is used to draw graphics, animations, or other visual elements on a web page. It provides a drawing space defined by its width and height attributes. The content rendered inside the element is typically created using JavaScript.

Code used to create drawing space:




Styles
Computed
Layout
Event Listeners
Filter
:hov .cls
element.style {
}
.page-title-icons .icon { Canvas.css:355
margin: -6px -2px;
background-color: #8a8a8a;
}
.icon-user-login-small { Icon.scss:467
-webkit-mask-image: url(
/static/media/user-login-small…);
mask-image: url(
/static/media/user-login-small…);
}
.icon { Icon.scss:4
display: inline-block;
height: 24px;
width: 24px;
mask-type: alpha;
-webkit-mask-repeat: no-repeat;
mask-repeat: no-repeat;
-webkit-mask-position: center;
mask-position: center;
background: #333;
}
* { App.css:2
as.default div div.page-title-wrapper div.page-title span.page-title-icons span.icon.icon-user-login-small

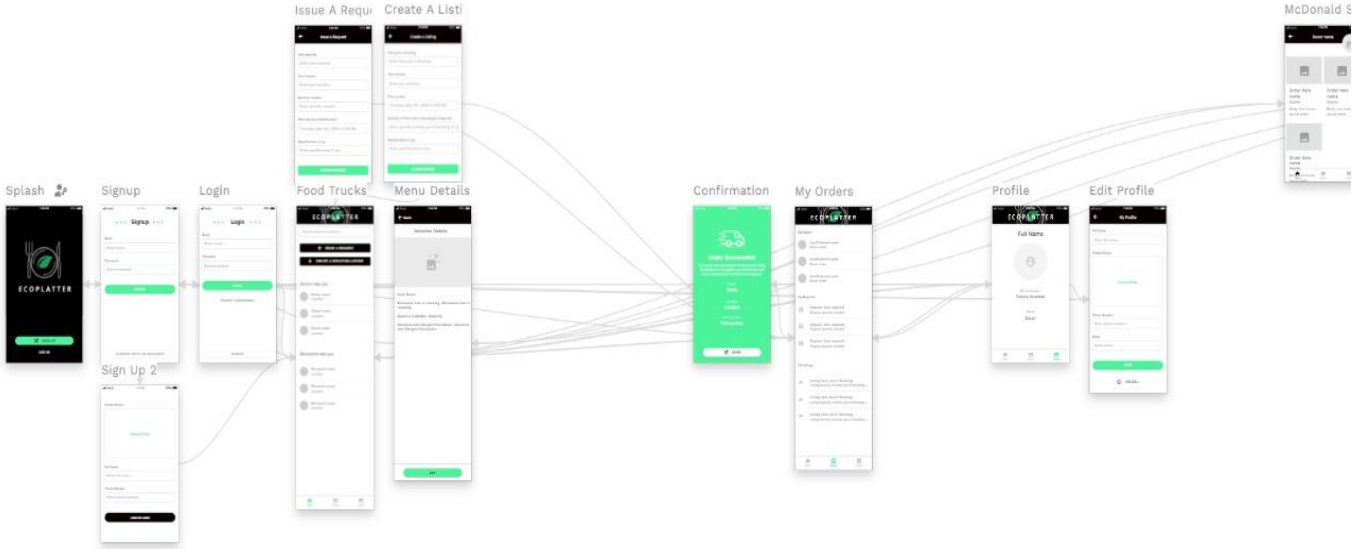

Styles
Computed
Layout
Event Listeners
Filter
:hov .cls
element.style {
cursor: ns-resize;
}
.resize-click-target { BoundingBoxes.css:6
fill: none;
pointer-events: all;
}
* { App.css:2
margin: 0;
padding: 0;
box-sizing: border-box;
}
rect[Attributes Style] {
width: 197;
height: 14;
}
:not(svg) { user agent stylesheet
transform-origin: 0px 0px;
}
Inherited from g.bounding-box
.bounding-box { BoundingBoxes.css:2
pointer-events: none;
}

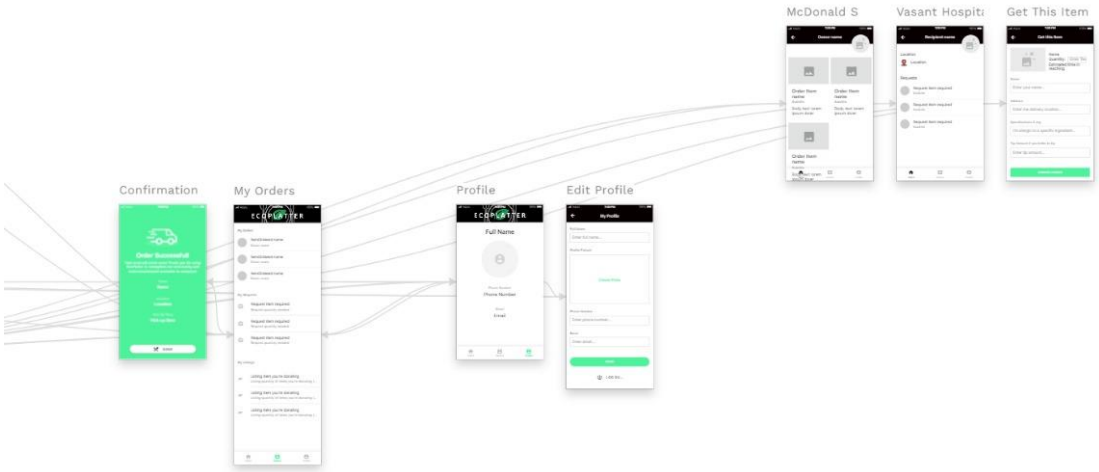
Design of logo:

splash screen

design of background using canva and logo was designed using gimp :

Proposed model working images





Monetization Strategies

Subscription Plans: Offer premium features for businesses and organizations, such as advanced search filters and priority listings.

Donation Fees: Charge a small fee for businesses and restaurants for each successful food donation to support the platform.

Advertisements: Display local advertisements from businesses that support the app's mission.

Conclusion

The identified problem revolves around the optimization of waste management systems, with a focus on surplus food. The proposed solution entails the development of a comprehensive app that acts as a nexus, connecting companies, organizations, and individuals to streamline the donation of surplus food.This innovative platform incorporates user-friendly features such as personalized registration, catering to both individual donors and businesses. Donors can list surplus food items, specifying details like type, quantity, expiration date, and pickup location. Simultaneously, a sophisticated food request system enables charities, food banks, and individuals in need to seek specific food items, triggering notifications to potential donors. The app also boasts location-based search functionalities, displaying nearby donation and pickup points on a map, fostering community engagement and convenience.

Future scope

The future scope of an app facilitating surplus food donation involves potential expansion, increased efficiency, and broader societal impact. This includes:

Global Scale: Extend the app's reach to a global audience, fostering international collaboration in reducing food waste and addressing hunger.

Financial Integration: Incorporate seamless financial transactions within the app to cover expenses related to transportation or storage.

Partnerships: Forge partnerships with government agencies, corporations, and non-profits for increased support, creating a more extensive network for surplus resource distribution.

Sustainability Metrics: Develop features that highlight the environmental impact of reducing food waste, contributing to a more sustainable and eco-friendly approach.

Education and Awareness: Provide educational resources within the app to raise awareness about food waste reduction, sustainable living practices, and the broader impact of donations.

Accessibility and Inclusivity: Ensure the app is accessible to people with disabilities and consider features for areas with limited internet connectivity.

By considering these aspects, the app can continue to evolve and meet the dynamic needs of companies, organizations, and individuals involved in surplus food donation, fostering a positive societal and environmental impact.