

# *GreenGrub*

Mobile application that encourages users to make more sustainable food choices by gamifying the experience

GDSC Community Project Presentation

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# *Overview*

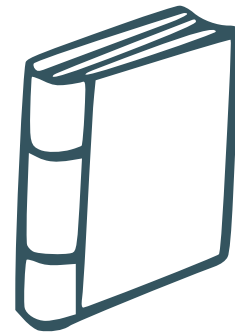
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# *Problems Addressed*



## **Lack of knowledge to make sustainable choices**

Mass media has brought awareness to the importance of sustainability but often people lack the knowledge to lead sustainable lives



## **Learning about sustainability is not engaging**

There is a wide range of topics within sustainability making it difficult to learn and even harder to stay engaged



## **Insufficient sustainability information about U of T**

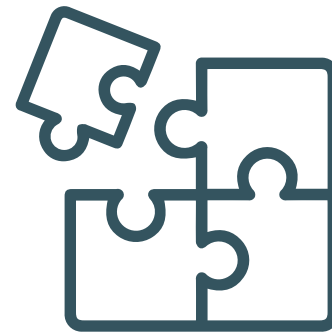
Although U of T has launched many sustainability tools, none of them effectively educate students on sustainability at U of T

# *Core Features*



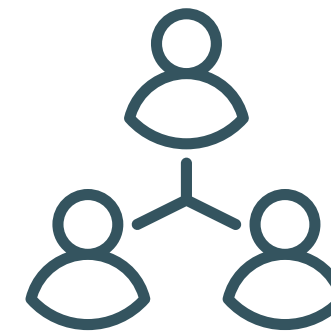
## **Scanning of food items for feedback on sustainability**

Users can instantly learn about the food products by scanning the barcodes and getting a nutrition and sustainability score



## **Gamification for learning about sustainability**

Quizzes for various topics including different areas in sustainability and information about U of T



## **Making friends and competing on leaderboard**

Users will be engaged by competing with their friends and earning points for completing quizzes and buying sustainable food items

***Demo Time!***

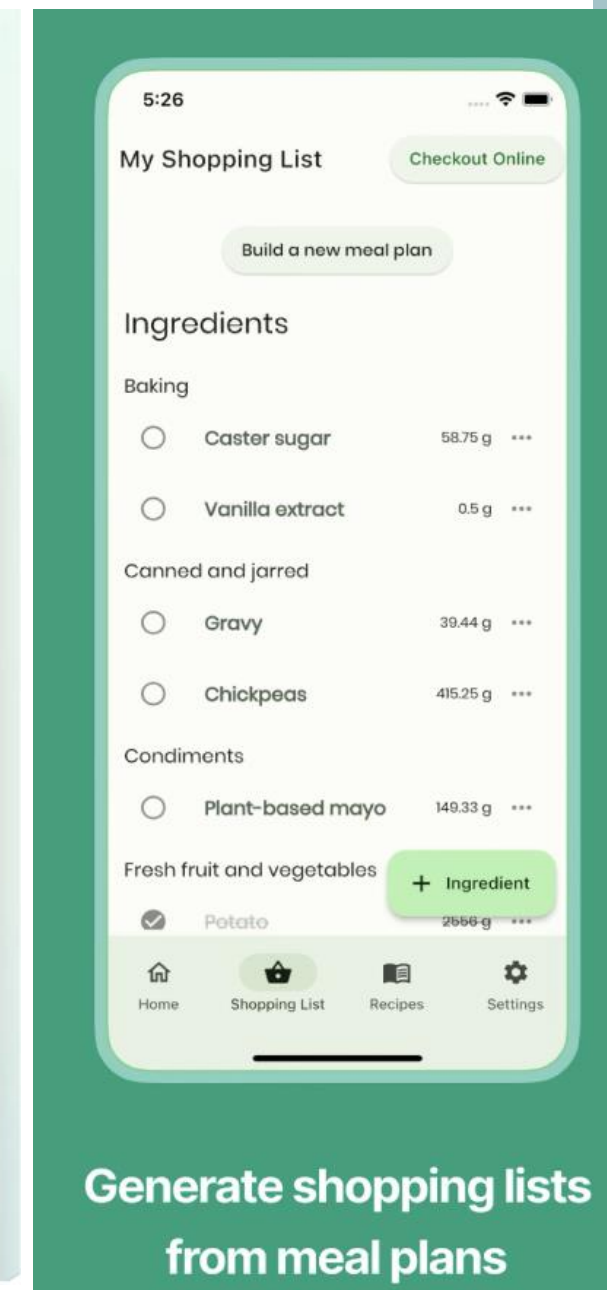
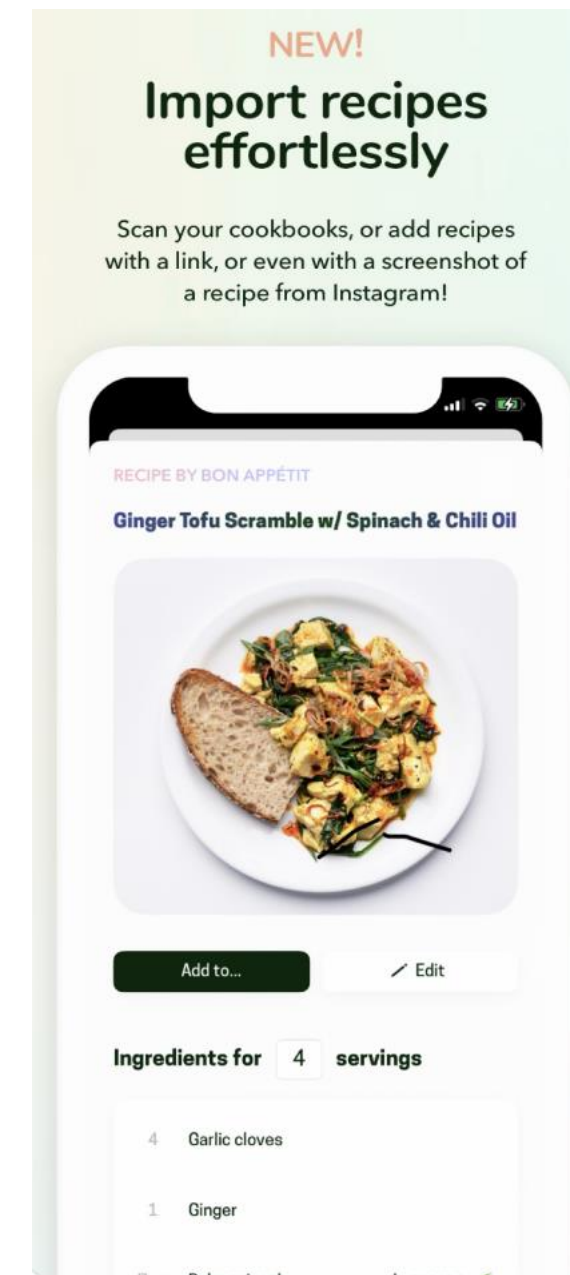
# Design & Inspiration

Earthy colorful tones, simplicity of use, interactivity and quick feedback to the user

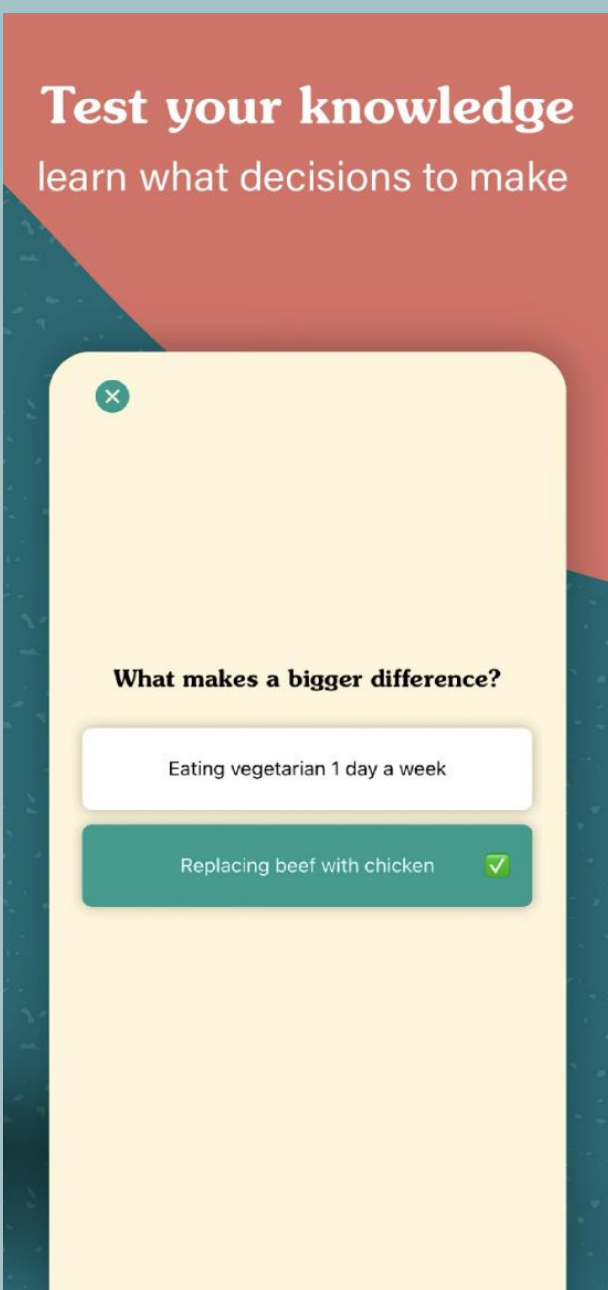
Gamification and some meal planning capabilities

Similar nutrition tracking or meal planning applications with differentiation particularly to students and U of T community

Notable examples: Yuka, Fork Ranger

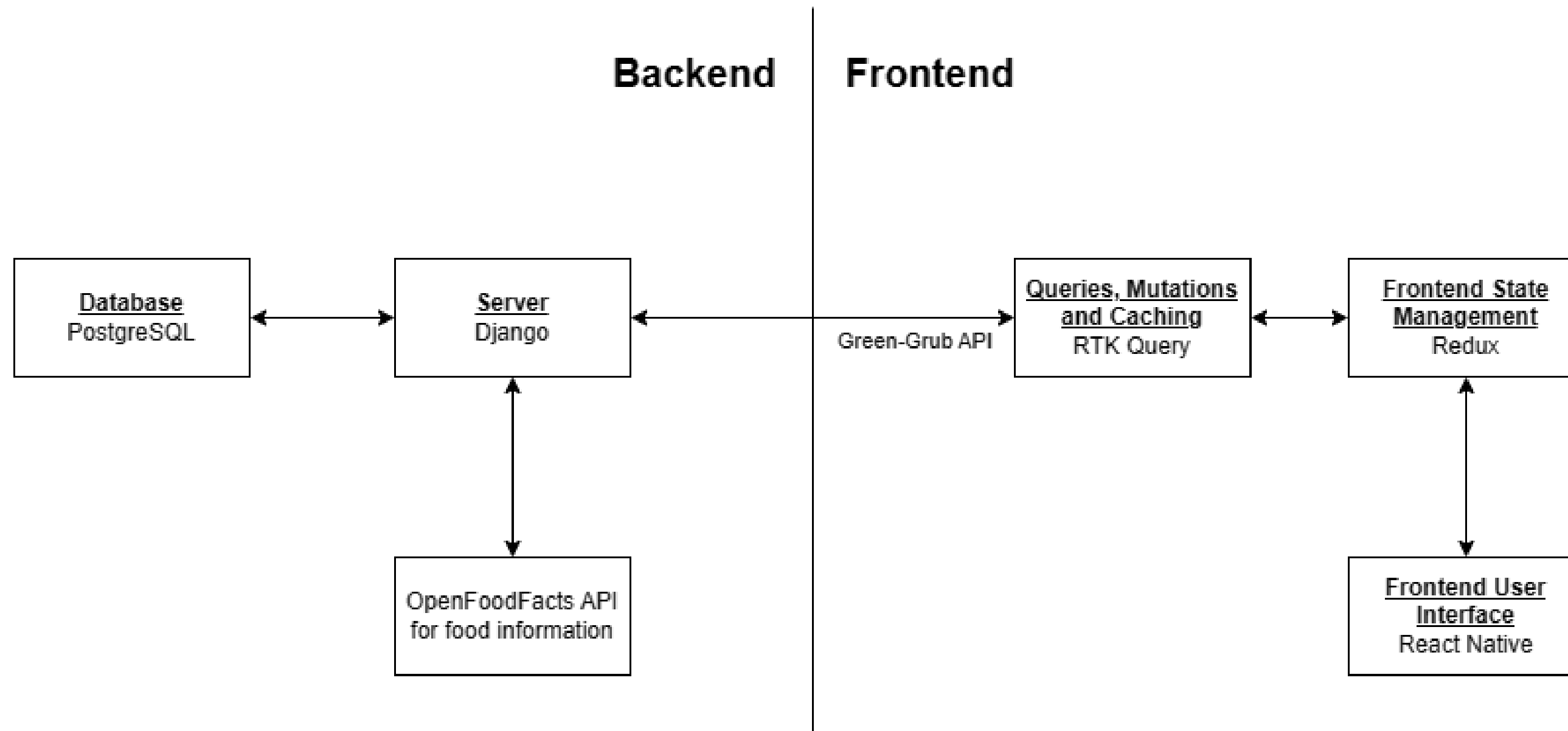


Generate shopping lists from meal plans



[Link to Figma Prototype](#)

# *Architecture Overview*





# *Frontend Development*

## Mobile Application

### Mobile Application

- React Native for multiplatform mobile development
- Redux for state management
- Redux Toolkit for queries

### Features

- Barcode scanning
- Cart creation
- Leaderboard and dashboard for score overview
- Quizzes based on topic
- Update profile information



# *Backend & Documentation*

Database and data processing

## Django Framework

- Django REST for handling API requests
- JWT Authentication
- Requests library for third-party API requests

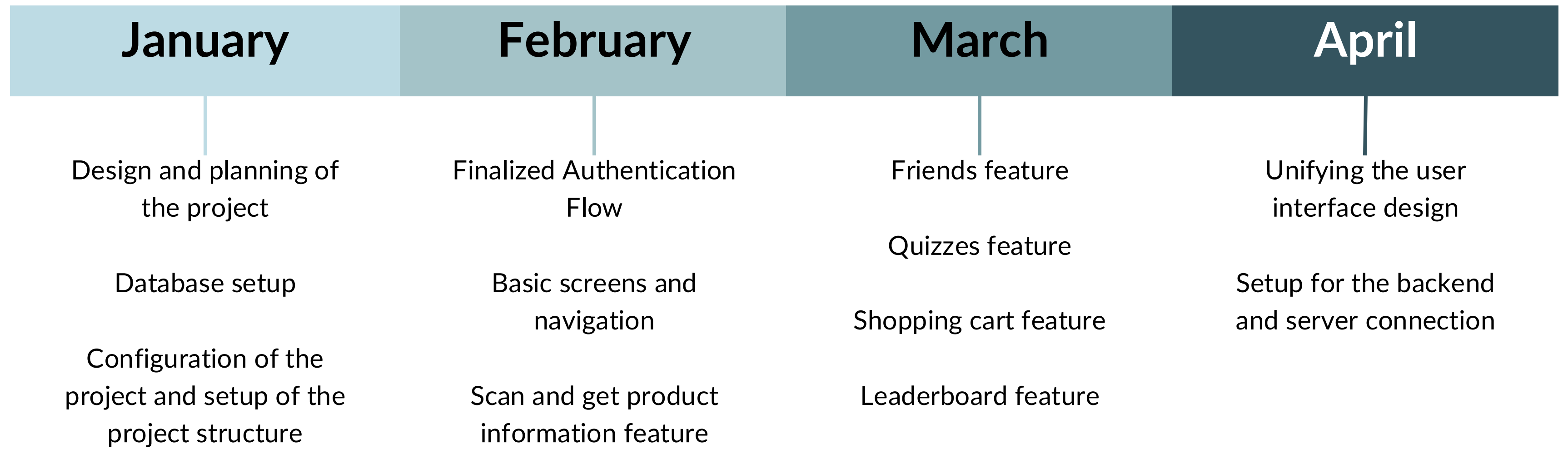
## Features

- Easy connection with front end
- Error handled and secured API requests
- Database can be easily exported and managed

[\*Link to Backend Documentation\*](#)

# *Overview of Development*

Brief description of development stages over the semester



# *Contributions*

## Razeen Ali

### Backend

- Set up initial backend structure
- Set up getting third party API data
- Friends related API
- Shopping cart API
- Deploy Backend

## Isha Juneja

### Backend

- Designed database models
- Quizzes related API
- Designed score calculation
- Backend documentation
- Unifying /improving UI

## Adel Muursepp

### Frontend & Design

- Figma prototype, user documentation
- Quizzes feature and quizzes data
- Dashboard and score view
- Unifying and planning the UI design

## Henrik Zimmermann

### Frontend Development and Setup

- Secure Login and Register Flow
- Barcode Scanning
- Food Item Display & Organization (Carts)
- Friend integration
- Frontend Deployment

# *What we learned*

## Razeen Ali

- Creating a responsive and secure API
- Structuring database models
- Improved documentation skill
- Deploying backend

## Isha Juneja

- Working with Django
- Working with APIs
- Writing documentation for a backend
- Improved database design skills

## Adel Muursepp

- Working with React & Redux
- Mobile development for Android
- Connecting frontend with backend
- Designing user journeys and coding in the team

## Henrik Zimmermann

- Scaling a React Native App
- Structuring Application State and Caching
- Signing and packaging React Native Apps



# ***Future***

## Potential Future Features & Integration with the U of T Sustainability Office

### **Additional Functionalities**

Receipt scanning

Sign in with UTORid or OAuth

Unlocking recipes or prizes based on points

### **Improvements to User Experience**

Handling increased traffic on the backend

iOS application development

### **Focus on U of T Community**

Quizzes content focused on U of T

Integration with U of T cafeterias

Challenges and prizes for U of T students

***Thank you!***

