



CSCI-665:Software Engineering-Spring 2020



Index Terms: barcode, QRCode, food, nutrition, health, GPS, store, mobile, app, track, website, android, ios

## Abstract

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The purpose of this project is to design a mobile application that encourages the user to have a healthier lifestyle. A healthy lifestyle includes a balanced diet and consistent exercising. We noticed the importance of eating healthy and the impact it has on one's lifestyle. There are a variety of food options and with that said it can be hard to track what one consumes or even find those given items. For this application, we focus on one's eating habits to maximize their healthy lifestyle. The way that our application works is that it easily scans food barcodes and QR codes. Scanning a food item can provide the nutritional value of that product. Once a user logs in, they have the ability to store their food information and view where they can purchase their scanned food items based on their GPS location. Overall, it's a system to scan and manage the information of food items, so the user can stay on top of their health goals.

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# Introduction

# Existing Systems

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Fooducate



Shopwell



Ultimate Food Diary Plus



# Features of Proposed System

## Authentication Mechanism

allow for a secure and customized experience for users.

Login

## Phone Camera

scan the barcode/ QR code of product and view its nutritional value.

Scanning

## Saving Mechanism

a month long history of scanned foods.

History

## Nearby Stores

find stores based on GPS coordinates that carried that scanned item.

Location



## **Concurrent Model**

work simultaneously  
Saves Time  
Feature-Driven Development

**Software Engineering Model**





# Purpose

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To provide a healthy lifestyle for our users through the use of saving one's food intake information and allowing users to locate those foods for easy consumption.



# Goals

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## **Cross-Platform Application**

work for Android and  
IOS users



## **Simple and Appealing Design**

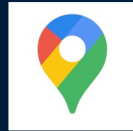
app's layout consists of  
a few bottom tabs  
and a pull out menu  
to navigate easily  
through the app.



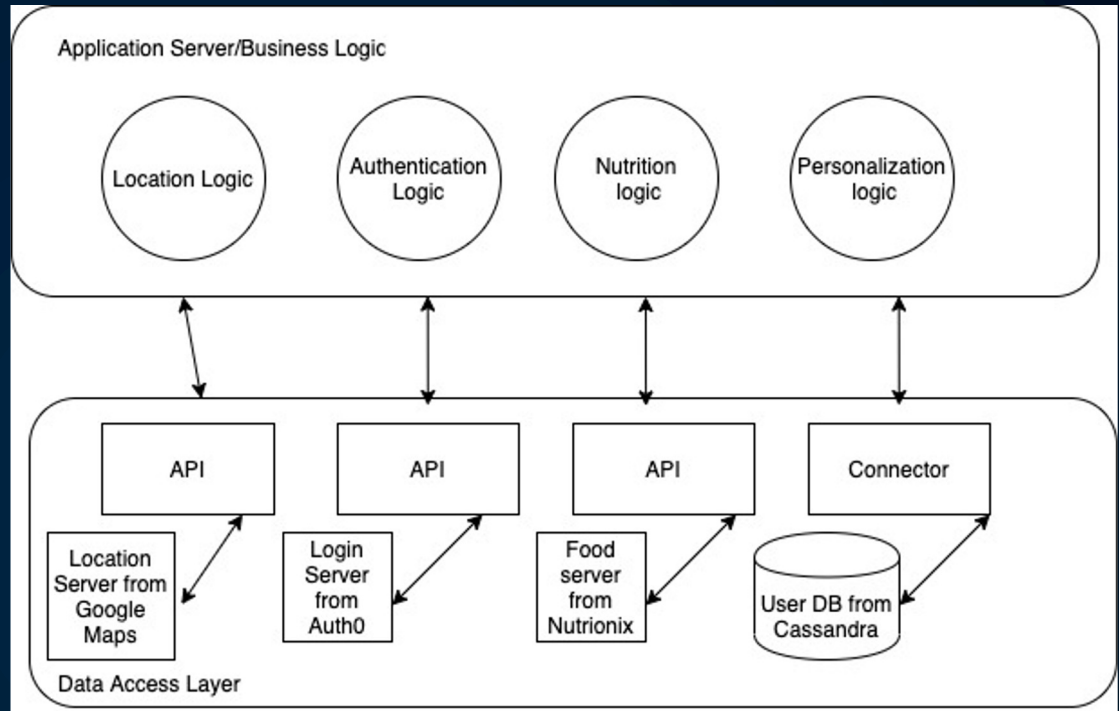
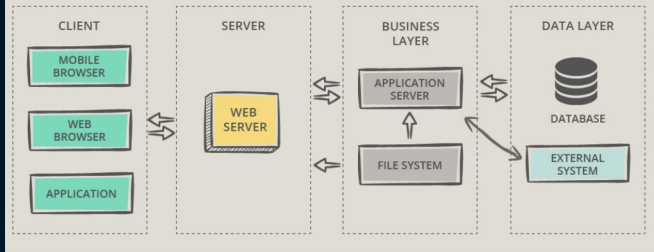
## **Secure and Reliable Login**

to make sure they  
can save their  
information like  
scanned items.

# Technologies and Tools



## NODE.JS WEB APPLICATION ARCHITECTURE



# Architecture

# Users











Feature		Admin	User
1	View Scans	✗	✓
2	View Locations	✗	✓
3	View History	✗	✓
4	login-Auth0	✓	✓

## Users

+ CREATE USER

An easy to use UI to help administrators manage user identities including password resets, creating and provisioning, blocking and deleting users.  
[Learn more](#)

Search by User X RESET

Name	Connection	Logins	Latest Login ↓	
 Nick Lombardi	Username-Password-Authentica...	2	an hour ago	
 Kevin Hunte	google-oauth2	2	7 hours ago	
 Fernanda Tovar	google-oauth2	1	20 hours ago	
 Akash Ravindran	google-oauth2	2	a day ago	
 Nicholas Lombardi	google-oauth2	3	a day ago	

# Motivation

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## **Beneficial**

Impact us in a positive manner if we use the App.



## **Build Resume**

This App required a combination of new tools and technologies that can help us become better programmers.

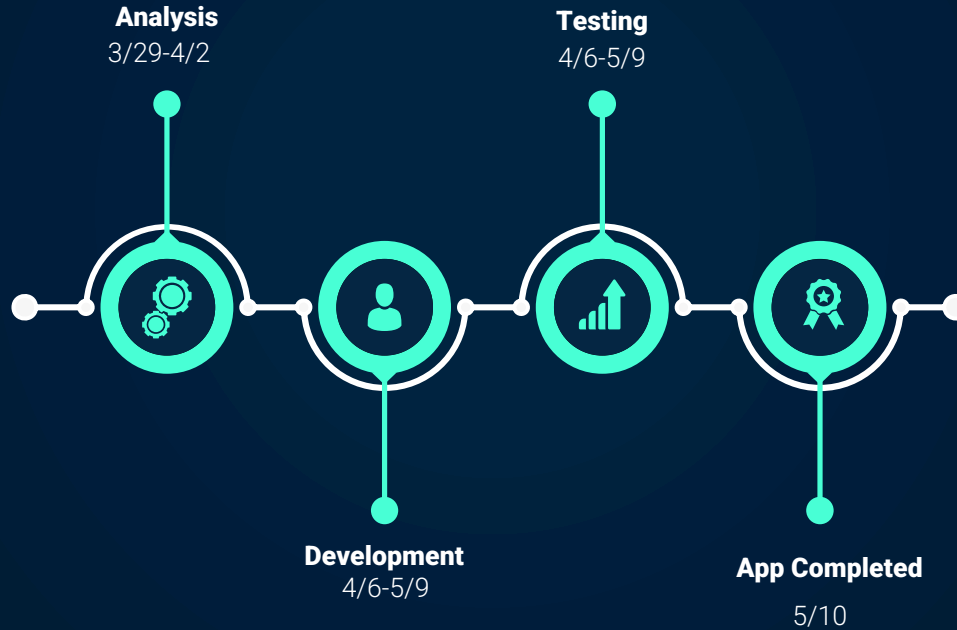


## **Fun**

It was fun to challenge ourselves and it was really interesting to see how the App was put together. It was also exciting to see when bugs were fixed after working at it for a while.

# OUR TIMELINE

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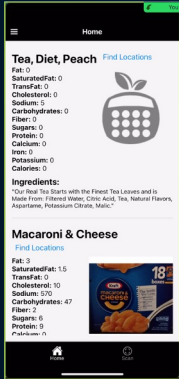


# Analysis of the System

# Activity List

Hamburger  
Style Menu  
Options

After scan,  
it will show  
history



Button #1



Home

Nom nom nom... start scanning your food to keep track of what you eat!



Login Pop  
up  
Before  
Access  
Home

Cancel [dscanningapp.us.auth0.com](#) AA ↻



Welcome

Log in to foodscanningapp to continue to FoodScanningApp Mobile.

Email address


Password

[Forgot password?](#)

[Continue](#)

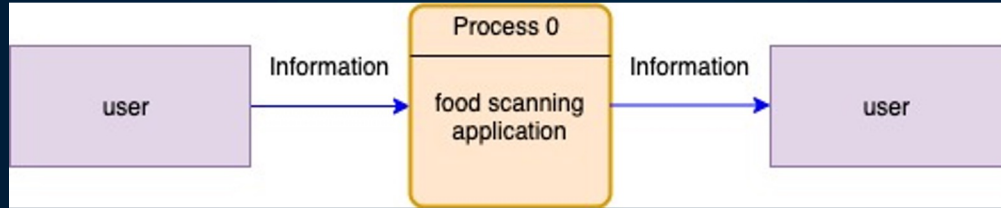
Don't have an account? [Sign up](#)

OR

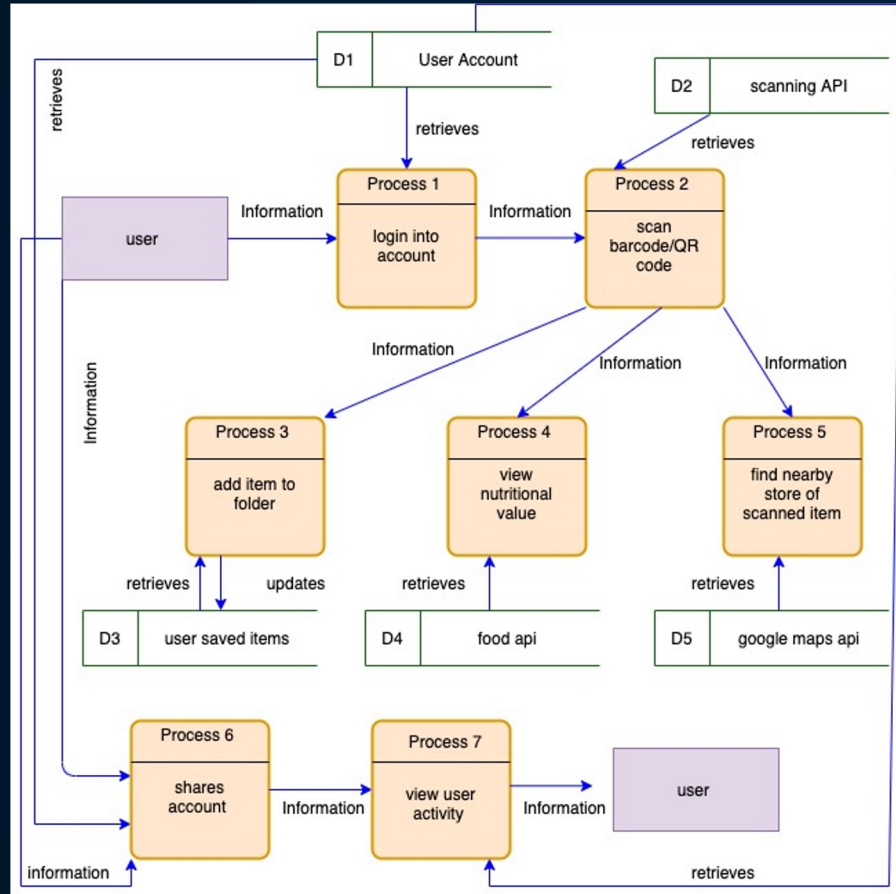
 [Continue with Google](#)

Button #2



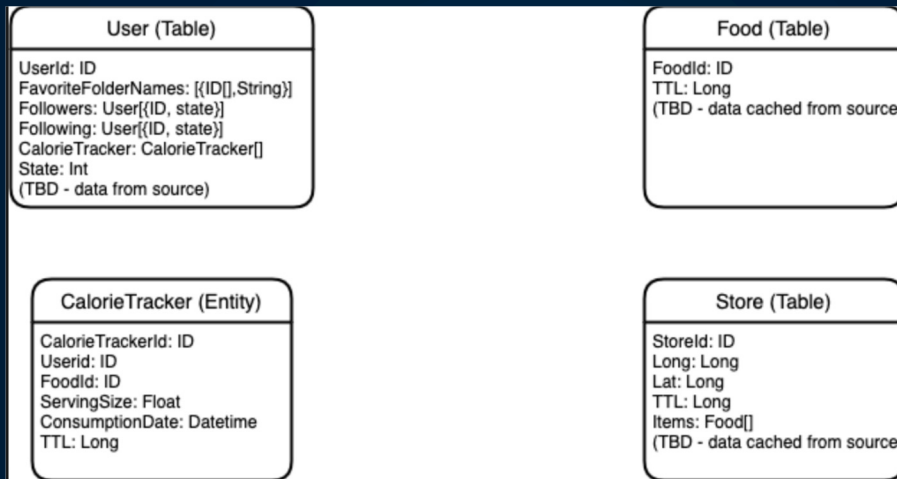


## Context Diagram

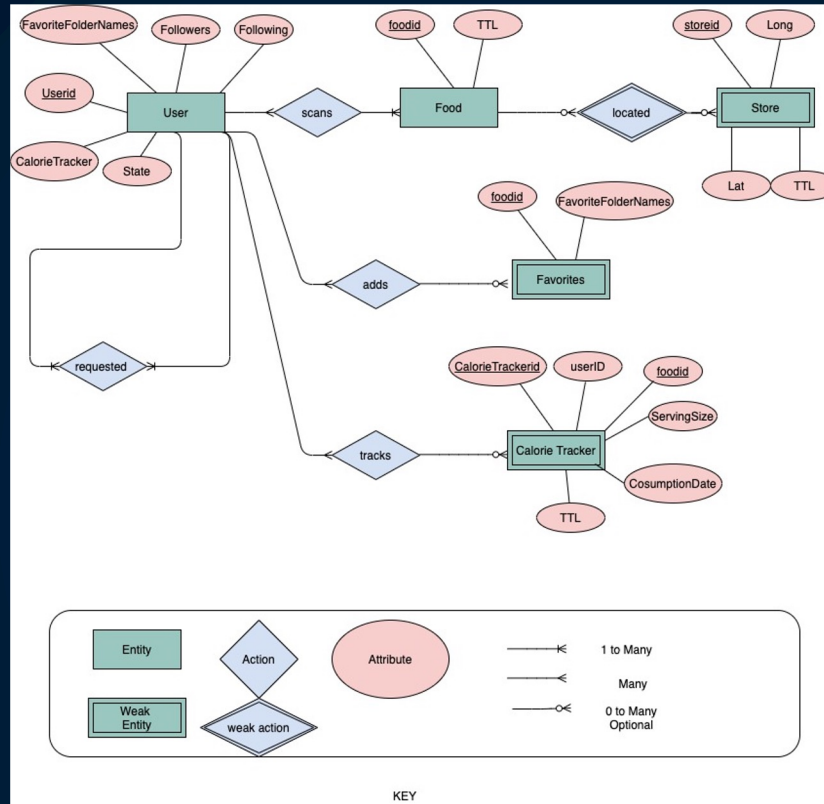


# Data Flow Diagram

# Database Design



# Table Schema

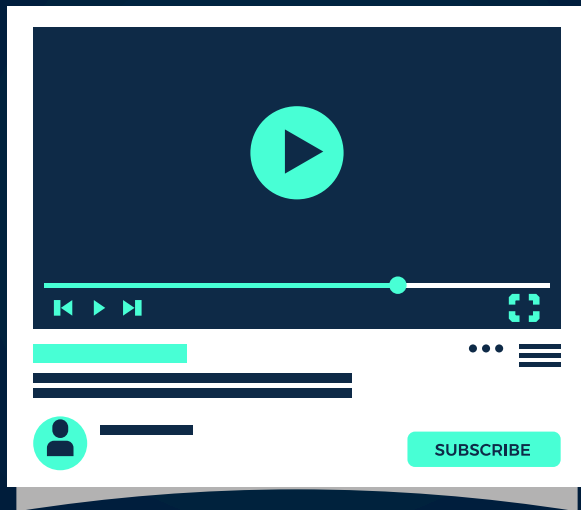


# Entity Relationship Diagram

# Functionality and Implementation

# Live Demo

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We will continue with the slides after the live Demo!

Testing



# Testing

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## Objective

This initial release focuses on the deployment of the minimum viable product, which consists of three features. These include the food scanner, store location, and login features.

Acceptance criteria for each feature are defined in terms of expected behavior. This behavior-driven approach ensures that development, testing, and user-acceptance aligns with the best experience for the customer.

## Requirements

## Test Cases

Food Scanner

Happy Path - Scan foods - iOS

Happy Path - Scan foods - Android

Happy Path - Return nutritional information - Services

# Conclusion

# Limitations

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**Time Constraint**



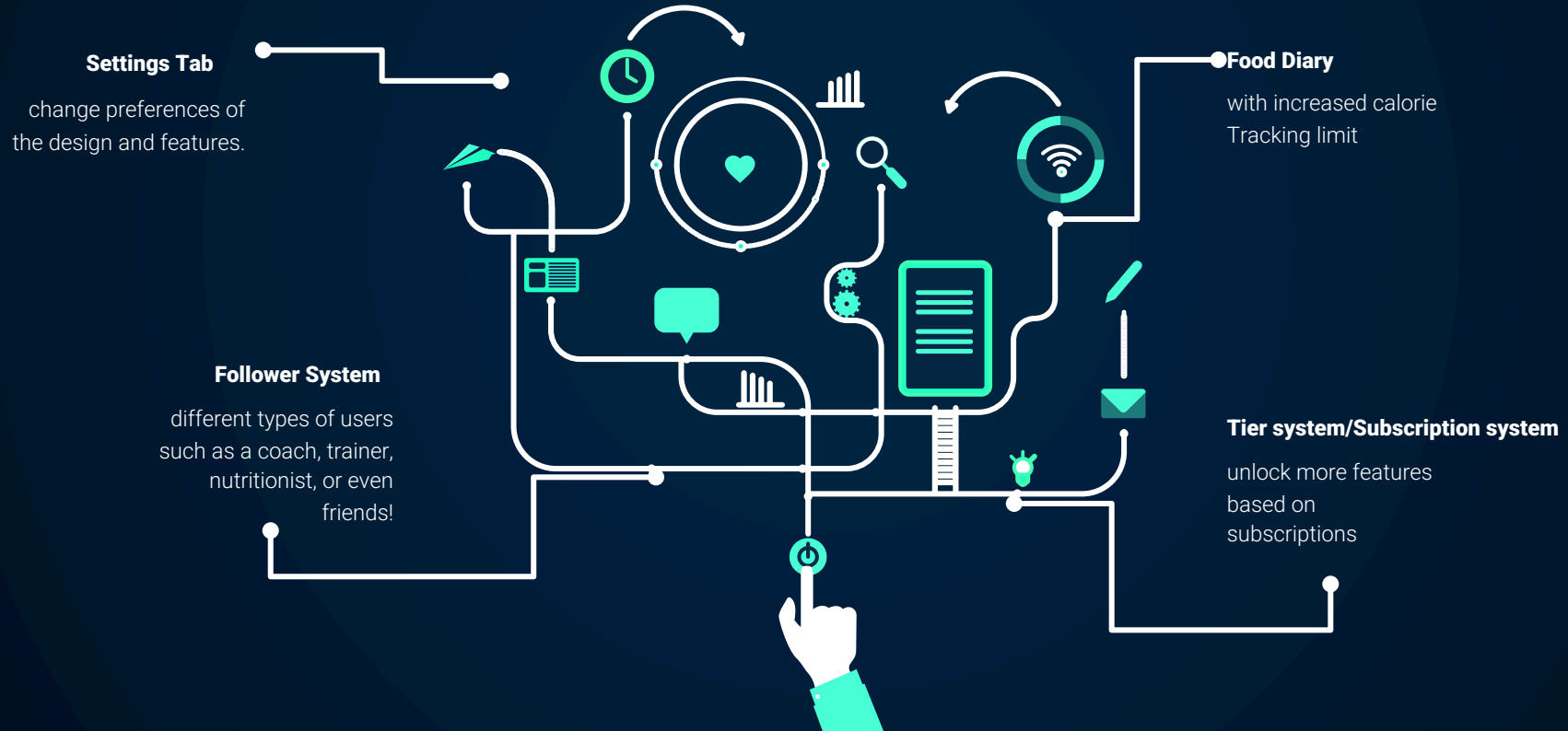
**Depends on 3rd parties**



**Monetization**

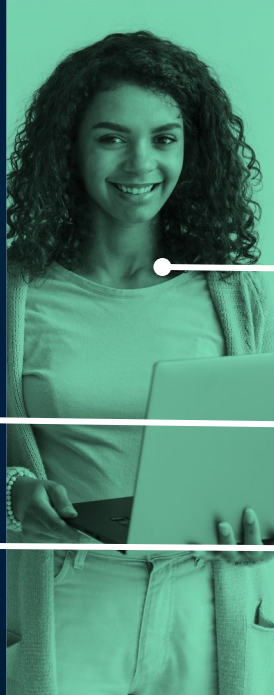
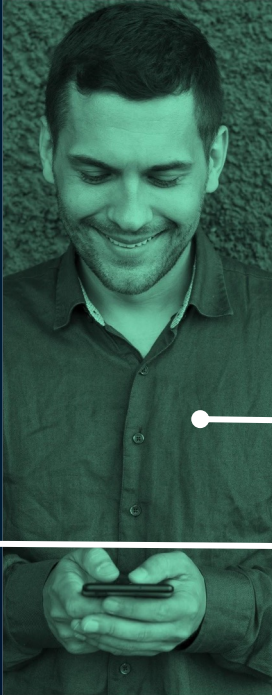
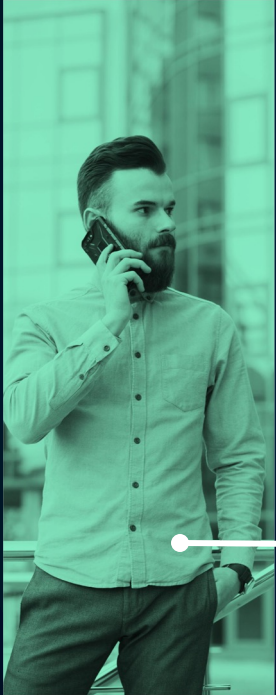


# Future Enhancements



# The Team

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**Fernanda Tovar, 1090913**

**Akash Ravindran, 0865256**

**Kevin Hunte, 1030750**



# THANKS!

Does anyone have any question?

Check out the code on Github  
<https://github.com/kevhunte/FoodScanningApp>