The Fresh Bagels

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Sam Frisch: frischsl@mail.uc.edu | CS
Zac England: englanzc@mail.uc.edu | CS
Professor Han: han@ucmail.uc.edu

Project Purpose and Goals

- Implement an application with real benefits to everyday living

- Create a new process in which to aid ability to take care of ourselves physically

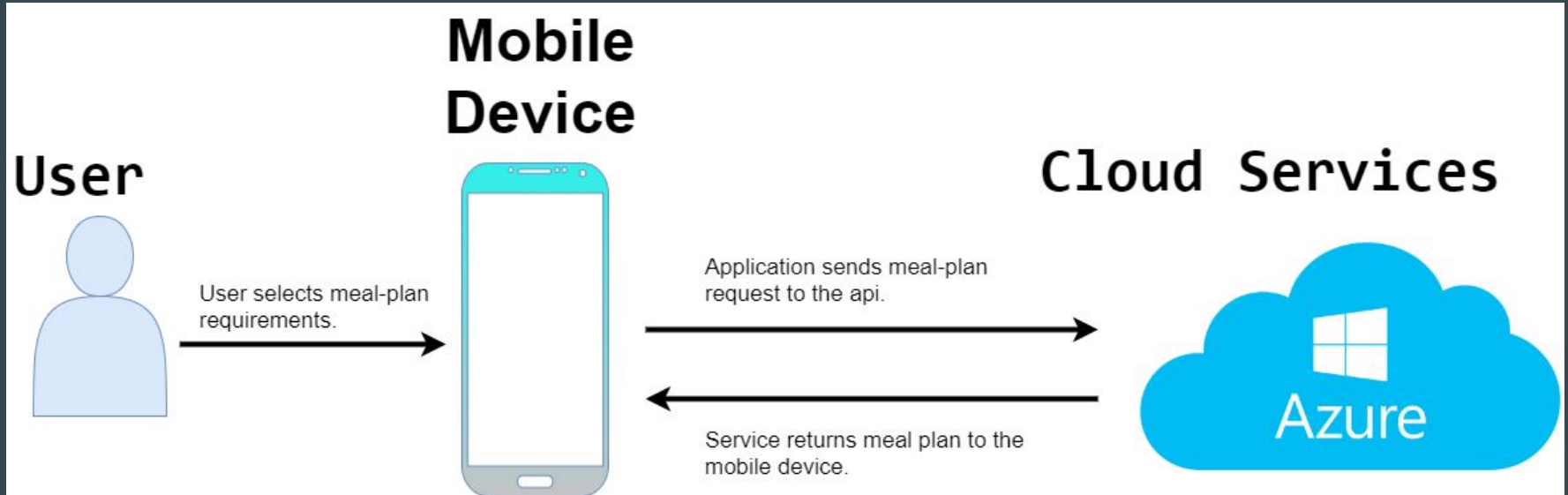- Gain experience with new technologies

Project Abstract

The purpose of our project is to create an application that will solve a very common problem for many people, "What do I eat today?" Many people today live very busy lives and do not make the time to structure their meals how they really want. So instead they eat a lot of unhealthy meals because they seem to be the only option for their schedule.

With our application we hope to give users an easy way to answer the question and have a Meal Plan that suits their health needs best. The application will gather a user's nutritional requirements and comprise a meal plan that meets the needs of each individual user.
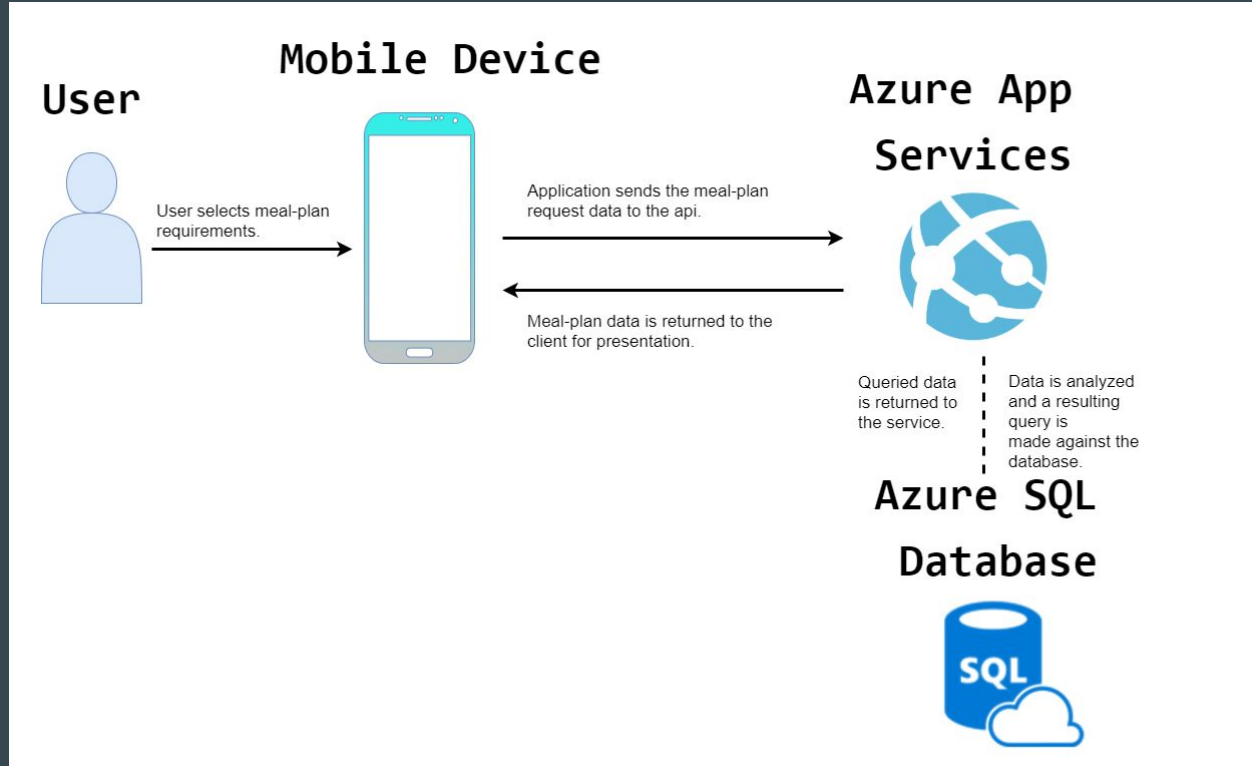
User Stories

1. As an athlete, I want to effortlessly create nutritionally accurate meal plans week to week, so that I can stay in peak physical shape.
2. As a parent, I want to spend less time buying / making food for the family, so that I can spend more time elsewhere.
3. As a social media user, I want to keep track of what family and friends are eating, so that I can have new foods to experience.
4. As a college student, I want to see how much I will be spending on food every week, so that I can budget accurately.
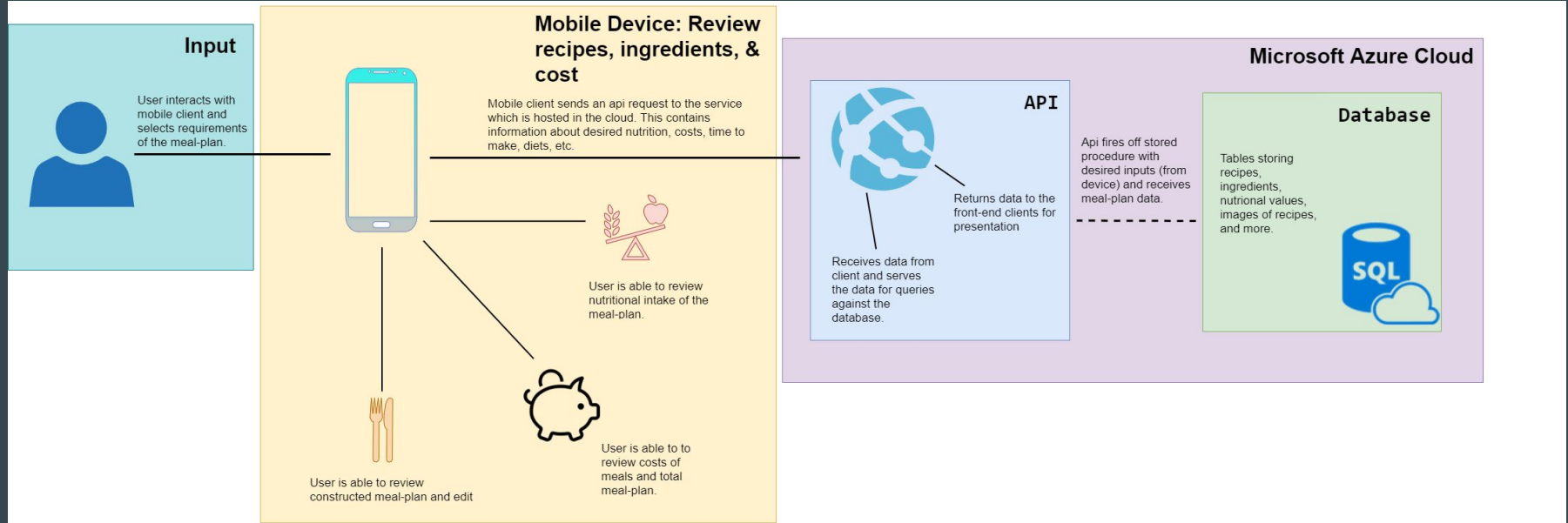5. As a human being, I want to be more mindful of what I eat, so that I can be healthier.

Design Diagram Level 0

Design Diagram Level 1

Design Diagram Level 2

Input

User interacts with mobile client and selects requirements of the meal-plan.

Mobile Device: Review recipes, ingredients, & cost

Mobile client sends an api request to the service which is hosted in the cloud. This contains information about desired nutrition, costs, time to make, diets, etc.

User is able to review nutritional intake of the meal-plan.

User is able to review constructed meal-plan and edit

User is able to review costs of meals and total meal-plan.

Microsoft Azure Cloud

API

Returns data to the front-end clients for presentation

Receives data from client and serves the data for queries against the database.

Api fires off stored procedure with desired inputs (from device) and receives meal-plan data.

Database

Tables storing recipes, ingredients, nutrional values, images of recipes, and more.

SQL

Major Project Constraints

Ethical/Legal:

- Using recipes that reside in the Public Domain (Internet).
- If a recipe does not come with nutritional values, adding these values based on how our database stores ingredient amounts may come up with erroneous values which can then be considered misleading.

Security:

- If we are able to implement a service to order ingredients from a third-party, this data transfer as well as financial data used to purchase such goods could be jeopardized if not protected appropriately.

Review of Project Progress

- Research on frameworks
  - Flutter
  - .NET Core APIs
  - Azure Cloud Services
- Gathering data
  - Recipes
  - Nutritional data
- Database structure

Expected Accomplishments for this Semester

- Prototype of a Flutter App

- Prototype of a REST API

- Initial Configuration of a Database w/ Data

Division of Work

Timeline			Effort Matrix	
Task/Milestone	**Start Date**	**Completion Date**	**Primary Owner**	**Effort Hours**
Complete design details / solidify technologies and scope of project	10/2	10/9	Both	3
Gather data from web to use as resources	10/2	10/9	Sam	3
Research and understand different popular diets (athlete, daily needs, etc.)	10/2	10/4	Zac	1
Create recipe database with ingredients dataset and compose table structures	10/9	10/23	Zac	6
Research mobile application platforms/languages	10/9	10/16	Sam	3
Obtain any necessary software or licenses	ongoing	ongoing	Both	2
Build mobile application Flutter	10/16	11/13	Sam	12
Build Restful api	10/23	11/20	Zac	12
Iterate on the Previous Two after winter break	1/8	1/15	Both	3
Integrate api into Azure web services	1/22	2/5	Zac	6
Develop tests for creating meal plans	1/22	2/5	Sam	6
Host DB in Azure Cloud	2/5	2/12	Zac	3
Evaluate functionality	3/5	3/12	Both	3
Explore Additional Functionality	3/12	3/19	Both	3
Tweak project for better results	3/19	3/26	Both	3
Write up report/presentation	3/26	4/9	Both	6

Expected Demo at Expo

We plan to have our mobile application, with at least the bare minimum features. Specifically this would be the Flutter mobile frontend communicating with the DB through the API. Within the application, the user will be able to create a meal plan specified to their nutritional desires.