Food Planner 2 Demo

Authors: Donald Ford, Dale Park, Andrew Lo, Youjung Kim, Vaneesh Bahl

Team Name: Runtime Terror

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FOOD PLANNER 2: PROJECT GOALS

- Allow users to look up recipes based on:
  - Dietary conditions
  - Available ingredients
- Recipe Results
  - Link users to full recipes
  - Also display some basic nutritional information
- Connecting application to FHIR
  - Pull end user allergies from FHIR database

PROJECT REQUIREMENTS

1	User can create a new account & login with an existing account.
2	Upon login, User should see Allergies, Ingredients and Recipe tabs
3	User can select various Allergies on the Allergies page.
4	User can choose various Ingredients on the Ingredients page.
5	User can go to the Recipe Tab to see recommended Recipes.
6	On the Recipe screen, User can select the Cuisine.
7	On the Recipe screen, User can filter based on Allergies and Ingredients.
8	The App can recommend Recipes based on Cuisine, Allergies and Ingredients.

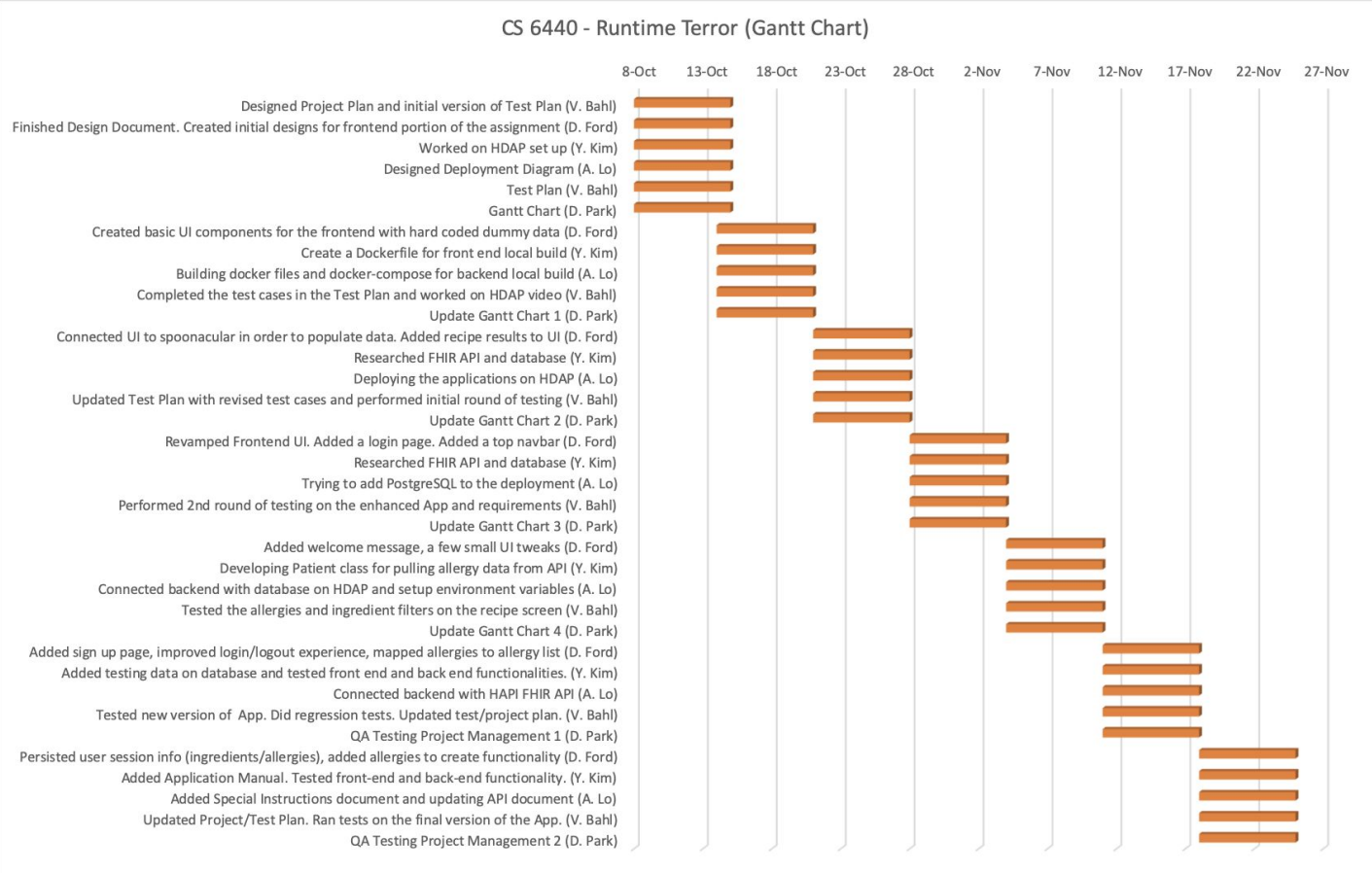
TEAM ROLES & CONTRIBUTIONS

NAME	TEAM ROLE	CONTRIBUTIONS
Donald Ford	Developer	Frontend react application development and design
Youjung Kim	Developer	Research FHIR API, Support database and Devops
Vaneesh Bahl	Quality Analyst/Manager	Research, Project & Test Plan, App Validation
Andrew Lo	Developer	Backend Java Spring Boot REST API and DevOps
Dale Park	Project Manager	Project Management, Team Organization, Research

PROJECT STATUS

- Overall Project Status - Green
    - Application is Functionally Ready and has been validated against the requirements and the business expectations.
        - Login Screen - Ready
        - Home Page - Ready
        - Allergies Selection - Ready
        - Ingredients Selection - Ready
        - Recipe Results - Ready
        - Connection to FHIR - Ready
        - Backend/Database - Ready

GANTT CHART



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RESEARCH BASED ON INDUSTRY PROBLEM

- **Industry Problem being addressed:**

  "A tool to help guide people in the direction of **Meal planning** based on current conditions. **Patient** should be able to upload their **Conditions/Allergies** and **Ingredients** of their choice from some source or manually…."

- **Other Food Apps in use:**

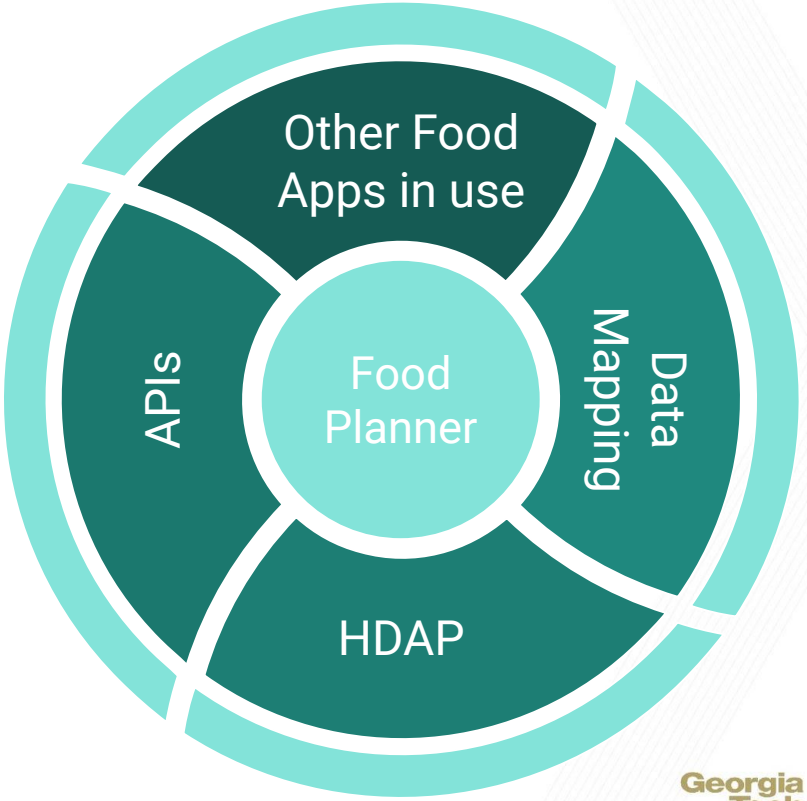
  Spoonacular, FoodPrint, Pepperplate etc.

- **APIs for Food, Allergy and Recipe:**

  https://fdc.nal.usda.gov/api-guide.html

  https://www.programmableweb.com/api/recipe-puppy

  https://healthdata.gov/



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RESEARCH BASED ON GAPS IN DOMAIN

Limitations in existing Apps	Solutions in our App (enabled by the research work)
Sharing of personal contact/health details in order to get a food recipe.	User does not have to share any data with us; they can just select allergies and ingredients and see the food recipes recommendations.
Paying extra for premium content.	All our services would be transparent with no hidden charges.
Limited recipes availability for free use or caping the daily usage	Our third party Apps may cap the daily usage in some limited scenarios but our App is not involved in any such restrictions.
Not a great coverage of recipes based on allergies and ingredients of user's choice.	We currently have APIs connected to one source to get the food recipe recommendations but in the future we aim to extend that to multiple sources.
Limited to No FHIR integration	Our App is able to integrate FHIR APIs in order to pull existing data (if he user was created via our App initially) and also we have successfully verified that any changes made to the Allergies of a user in our App, get registered in the FHIR.

RESEARCH - END USER INTERVIEWS

- There were no END User interactions in our case but we had a couple of brainstorming sessions with our TA (Taylor) to share his vision regarding our App.

- Taylor suggested the below points:
    - To let the user also select ingredients of their choice apart from allergies.
    - To have a Login/Sign-Up page included at the launch of the App.
    - To persist as much data on various screens of the App, as possible.

- There was due diligence done for all the above action items and the current version of the App supports almost all of these.

DEMONSTRATION OF APPLICATION FRONTEND

Live Demo!

https://apps.hdap.gatech.edu/newfoodplanner2frontend/

DEMONSTRATION OF APPLICATION BACKEND

Live Demo!

- Frontend URL: https://apps.hdap.gatech.edu/newfoodplanner2frontend/
- Postman script: https://github.gatech.edu/gt-cs6440-hit-fall2019/FoodPlanner2/blob/master/FoodPlanner.postman_collection.json
- pgAdmin 4: https://apps.hdap.gatech.edu/pgadmin/browser/
- HAPI FHIR: http://hapi.fhir.org/home?serverId=home_21&pretty=true&resource=AllergyIntolerance

FUTURE PLANS & OPPORTUNITIES

- Mapping AllergyIntorence (FHIR API) system code from random to Snomed.
- Integrate multiple recipe APIs for richer results.
- Improve user session persistence
  - Save user ingredients to the database.
- Provider login experience
  - Create a menu of multiple recipes.
  - Email menu of recipes to a patient's email address.
- A Patient matching algorithm to find existing FHIR patient ID can be implemented. (https://www.hl7.org/fhir/patient.html)

Recording Link of the Demo/Presentation

https://youtu.be/p7ctz9DMmjA

Thank you

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