

FUDO

By

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ABSTRACT

Through research conducted by McGarry Bowen and Kraft, 59% of 25 to 34-year old adults use their phones to look up recipes while in the kitchen. A Google consumer survey also states that for a quarter of online millennials, the most important part of cooking is putting a personal spin on the food. Fudo is a bridge between the kitchen and the digital age. Fudo gives these people a platform to easily access, customize and share their favorite recipes, while also making it simple to find new ones. Current avenues to find recipes online are hard to navigate and force the users to hunt through blog posts that conceal the recipes in favor of personal stories and ads. Fudo has adapted a sleek and modern interface coupled with an easy to understand user experience in order to bring the digital age to the kitchen table.

PROBLEM STATEMENT

Introduction

There is no shortage of places to find recipes online today. Any type of food you can imagine can be found at the click of a button. Unfortunately, these can be scattered and hard to navigate. With more people using their devices in the kitchen than ever, coupled with the issue of storage of multiple recipes, it is becoming more apparent that food culture has not yet caught up to the digital age. Fudo's goal is to create a polished application for food lovers to interact with the recipes they love.

Project Description

Fudo will be a social platform that brings chefs, recipes, and technology together. With Fudo, you will be able to create communities of friends with similar dining preferences, search for your favorite recipes or new ones to try out, create and archive recipes in a digital format that you can access from anywhere, as well as share your favorite recipes to other popular social platforms. Food brings people together and Fudo brings the people to the food. Fudo's target audience is anyone who considers themselves a foodie or would like to take control of what they consume. Whether you enjoy cooking for your family, big groups of friends, or would simply like to find healthier alternatives to fast food; Fudo has something for you.

Problem

As a food lover, it is difficult to find recipes online. There are several avenues you can use to find them, but they are all scattered, and you must wade through different sites and blog posts to get the recipe that you were initially searching for. In regard to ongoing issues when searching for recipes online April Glaser states, "My chief complaint: the annoying and increasingly ubiquitous tendency to start with a personal story" (April, Glasser. 2017). If you come from a

family that has recipes that have been passed down throughout the years, your recipes could have been written on stationary that is crumbling after decades of wear. This makes it risky to bring out in the kitchen due to the risk of it degrading further and it becomes a hassle to share.

Solution

Fudo is focusing on the core need of a clean, modern interface and intuitive user experience while interacting with recipes. Unlike any food websites or food blog posts, Fudo promises to give users a clutter-free experience while searching for recipe online by initially limiting user input. The application will apply smart form fields, intuitive formatting, and validation to add primary focus on the recipe and prevent any form of prolix writing. Users will be able to create and store their own recipes in the cloud for easy retrieval. Fudo also gives users the option of sharing their recipes with the community or keeping their recipes secret for private use. In addition, the application also offers users the ability to save other recipes that they find into their own recipe book. Fudo is meant to put the creation and management of recipes into the hands of the people.

Overview

In the remainder of this report, the Fudo team has compiled steps that were taken to manifest the idea of Fudo into a physical product. Team Fudo documented the estimated timeline and budget, who the user base will be, the technologies used, as well as screenshots of the project.

User Profile

Basic User Profile

Table 1: Basic User Profile shows the user profile for the Fudo Application. This model is representative of users that will be recipe creators and viewers of all ages. Fudo users will require moderate experience prior to using the platform but has a quick learning curve due to its simple search and intuitive UX. Fudo will be targeted at college students learning to cook, vegans,

vegetarians, and chefs of all experience levels looking to share their creations. Much of this demographic will have the experience required to navigate Fudo with ease and that is displayed clearly in the figure.

BASIC USER PROFILE	
Project Title:	Fudo
Potential Users:	College students learning to cook, families of 2+ cooking large meals, single women/men finding small solo meals, married couples seeking romantic meals, vegetarians/vegans discovering ways to get nutritional meals
Software, Interface, and Related Experience	Fudo users will need to have some experience navigating simple tabbed view mobile apps as well as experience using progressive web/desktop applications.
Experience with Similar Applications	<ul style="list-style-type: none"> - Pinterest - Instagram - Allrecipes - Big oven
Task Experience	<ul style="list-style-type: none"> - Using a web browser or mobile app to browse and search for different recipes - If users wish to save recipes for future use they will need to be comfortable creating an account on a desktop or mobile device - Users must be comfortable navigating a tabbed view mobile application
Frequency of Use	Fudo will be actively used when users are searching for new recipes, shopping for ingredients from saved recipes, as well as sharing original recipes. These actions will be taken daily, weekly, or monthly.
Key Interface Design Requirements that the Profile Suggests	<ul style="list-style-type: none"> - Create new recipes quickly and easily - Responsive design for mobile and desktop devices - Easily save recipes to a personal “recipe book” tab that can be accessed later - Share recipes to social media easily

Table 1. Basic User Profile

Admin User Profile

Table 2: Admin Profile shows the admin user profile for the Fudo Application.

A Fudo admin user will require extended knowledge of the platform in order to effectively manage application content. Users will be sorting through bug reports, flagged content, and potentially malicious text and images.

ADMIN USER PROFILE
Project Title: Fudo
Potential Users: Employees of Fudo performing maintenance, bug reports, and spam deletion.
Software, Interface, and Related Experience Fudo admin users will need experience with the public version of the application in order to make sure the quality of the content on Fudo remains high.
Experience with Similar Applications - Fudo (Public Version)
Task Experience - Using a web browser or mobile app to sift through bugs and reported content. - Admin Users must be comfortable viewing potentially graphic and negative content that may need to be removed.
Frequency of Use Administrative privileges on Fudo will be actively used when content, users, or bugs are reported and require review. These actions may be taken daily, weekly, or monthly.
Key Interface Design Requirements that the Profile Suggests - Delete malicious content quickly and easily - Receive reports in an organized que sorted by date - Send bug reports to developers and create a card in the backlog

Table 2. Admin User Profile

Use Case Diagram

Figure 1: Use Case Diagram displays the use case for Fudo. It shows the base level functionalities that all the Fudo users will have access to when using the application. Fudo Admin have the expanded ability to manage basic users and their information. Additional features will be added if the base level requirements have been met.

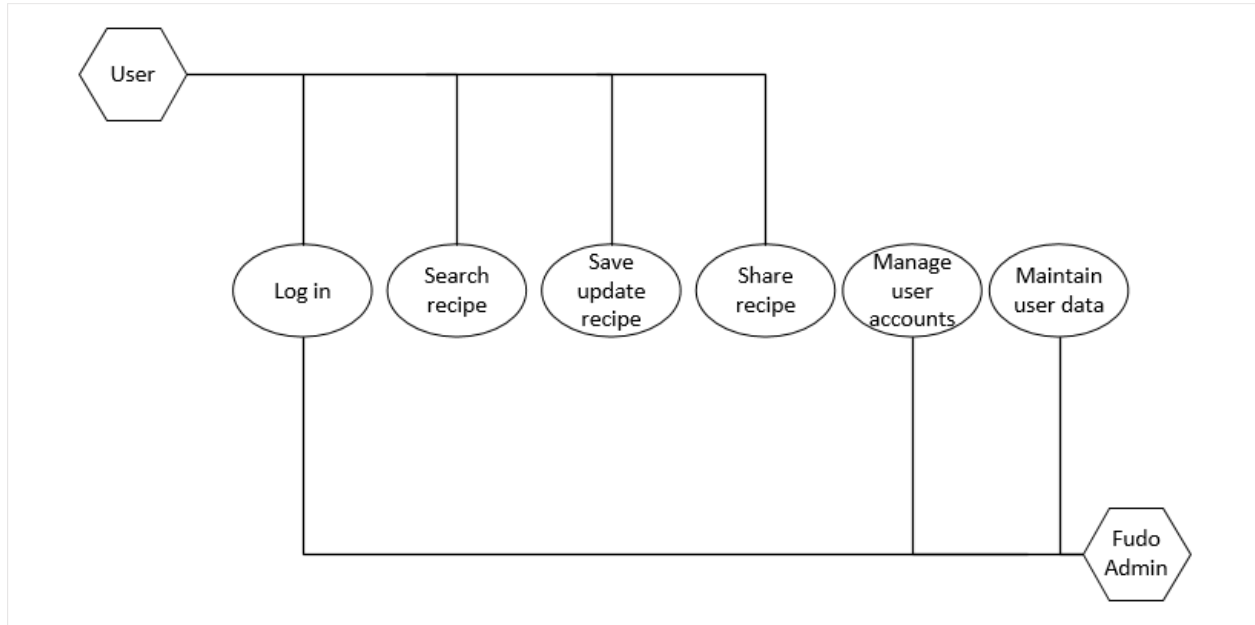


Figure 1. Use Case Diagram

PROJECT MANAGEMENT

Budget

Table 3: Budget outlines the budget for this project. Some of the costs for the budget cannot be estimated at this time due to not having the product publicly available. The primary cost for development would be labor. The hardware, database and hosting will not be considered right now because the team is currently using a free tier of Google firebase. Should the project expand, this section will be upgraded in the future. In addition, the software’s cost would also be ignored since the team will use free tier software tool such as VS Code or Web Storm. According to glassdoor.com the average wage for a JavaScript Developer is approximately \$48 per hour. (Glassdoor, 2019) Similarly, research done by Salary.com shows wages for an IT project manager averaging around \$58 per hour. (Salary, 2019) Since the project is spread over half a year, the labor cost will be estimated using these number for one project manager and two developers.

	Unit	Time	Cost per Unit	Subtotals	Total
1. Project Management					\$160,160
Project manager	1	1040 Hrs.	58	60,320	
Developer/Staff	2	1040 Hrs.	48	99,840	
2. Database					0
MongoDB	1	x	0	0	
3. Hosting					0
AWS	1	x	0	0	
4. Software					0
VS Code/Web Storm IDE	3	x	0	0	
5. Reserves (20% of total estimate)					\$32,032
Total project cost estimate					\$192,192

Table 3. Budget

Objectives/Deliverables

The projects major deliverables are illustrated in **Table 4. Major Milestones**. The table is divided into two sides. The left side presents timestamps of major project milestones, while the right side shows major assignment deliverables.

MAJOR MILESTONES			
FALL OF 2017 MILESTONES			
Team Building	8/31/19	Team Contract	9/21/19
Ideas and Design	8/31/19	Project Abstract	9/22/19
Planning	11/9/19	User Profile & Use Case Diagram	10/6/19
System Design	11/9/19	Elevator Speech	10/21/19
Setup Environment	11/10/19	Fall Presentation	12/2/19
Frontend Prototype	11/23/19		
SPRING OF 2018 MILESTONES			
Development Frontend & Backend	3/14/20	Spring Final Report	4/4/20
Deploy Application	4/4/20	Tech Expo	4/18/20
Testing	4/18/20		
Deploy Application	4/4/20		

Table 4. Major Milestones

Project Schedule

Table 5. Work Breakdown Structure and Figure 2. Gantt Chart demonstrates the work breakdown structure and Gantt chart, which depict an estimate of the time it will take to complete each task.

Task Name	Duration (Days)	Start Date	End Date
1.0 Project Management and Deliverables	245	8/25/19	04/25/2020
1.1 Team Building	7	8/25/19	8/31/19
1.2 Ideas and Brainstorming	7	8/25/19	8/31/19
1.3 Fall Semester Assignment 0: Team Members & Project Name	7	8/25/19	8/31/19
1.4 Fall Semester Assignment 1: Team Contract	21	9/1/19	9/21/19
1.4.1 Project Approval & Contract	21	9/1/19	9/21/19
1.4.2 Gantt Chart	21	9/1/19	9/21/19
1.4.3 Work Breakdown Structure	21	9/1/19	9/21/19
1.5 Fall Semester Assignment 2: Project Abstract for Tech Expo	14	9/22/19	10/5/19
1.6 Fall Semester Assignment 3: Team Contract Resubmission	7	10/6/19	10/12/19
1.7 Fall Semester Assignment 4: User Profile	14	10/6/19	10/19/19
1.8 Fall Semester Assignment 5: Use Case Diagram	14	10/6/19	10/19/19
1.9 Fall Semester Assignment 6: Draft Report	14	10/20/19	11/2/19
1.10 Fall Semester Assignment 7: Final Fall Semester Report	28	11/3/19	11/30/19
1.11 Fall Semester Oral Presentation	14	11/17/19	11/30/19
1.12 Spring Semester Assignment 1: Test Plan/Report	21	1/12/2020	2/1/2020
1.13 Spring Semester Assignment 2: Abstract	14	2/2/2020	2/15/2020
1.14 Spring Semester Assignment 3: Tech Expo Draft	14	2/16/2020	2/29/2020
1.15 Spring Semester Assignment 4: Final Poster	7	3/1/2020	3/7/2020
1.16 Final Presentation	21	3/8/2020	3/28/2020
1.17 Spring Semester Assignment 5: Final Report	7	3/29/2020	4/4/2020

1.18 Spring Semester Assignment 6: Safe Assign Final Report	7	3/29/2020	4/4/2020
1.19 IT Expo	14	4/5/2020	4/18/2020
1.20 Spring Semester Assignment 7: Final Library Copy	7	4/19/2020	04/25/2020
2.0 Planning	49	9/22/19	11/9/19
2.1 Define Product's Features	14	9/22/19	10/5/19
2.2 Study the Market and Familiar Product	7	10/6/19	10/12/19
2.3 Conduct Survey and Interview with Mock Stakeholders	7	10/13/19	10/19/19
2.4 Research Software Requirements	14	10/20/19	11/02/19
2.4.1 Determine Coding Framework	7	10/20/19	10/26/19
2.4.2 Determine Tools & IDE	7	10/20/19	10/26/19
2.4.3 Determine Hosting Environment	7	10/27/19	11/2/19
2.4.4 Determine Database Environment	7	10/27/19	11/2/19
2.4.5 Determine Security Requirements	7	10/27/19	11/2/19
2.5 Budget Analysis	7	11/3/19	11/9/19
3.0 System Design	35	10/6/19	11/9/19
3.1 UI/UX Design	21	10/6/19	10/26/19
3.1.1 Create Flowchart	21	10/6/19	10/26/19
3.1.2 Create Network Diagrams	21	10/6/19	10/26/19
3.1.3 Create Database Diagrams	21	10/6/19	10/26/19
3.1.4 Create Interaction Diagrams	21	10/6/19	10/26/19
3.1.5 Create Wireframe Diagrams	21	10/6/19	10/26/19
3.2 Create Legal Documentation	7	10/27/19	11/2/19
3.3 Review and Approval	7	11/3/19	11/9/19
4.0 Environment Set-Up	14	11/10/19	11/23/19
4.1 Setup GitHub	7	11/10/19	11/16/19
4.2 Setup Front End	7	11/10/19	11/16/19

4.3 Setup Back End	7	11/10/19	11/16/19
4.5 Set up Database Server	7	11/17/19	11/23/19
4.6 Set up Host Environment	7	11/17/19	11/23/19
5.0 Development (Back End and Front End)	133	11/24/19	4/4/2020
5.1 Develop Frontend	112	11/24/19	3/14/2020
5.1.1 Install Essential Packages	7	11/24/19	11/30/19
5.1.2 Create Landing Module	7	12/1/19	12/7/19
5.1.3 Create Error Module	7	12/1/19	12/7/19
5.1.4 Create Main Module	7	12/1/19	12/7/19
5.1.5 Create Features Components	84	12/1/19	2/22/2020
5.1.6 Unit Tests	21	2/23/2020	3/14/2020
5.2 Develop Backend	112	11/24/19	3/14/2020
5.2.1 Install Essential Packages	7	11/24/19	11/30/19
5.2.2 Connect to Database	7	11/24/19	11/30/19
5.2.3 Create Authentication Middleware	7	12/1/19	12/7/19
5.2.4 Create Error Handler Middleware	7	12/1/19	12/7/19
5.2.5 Create Routes	84	12/1/19	2/22/2020
5.1.6 Unit Tests	21	2/23/2020	3/14/2020
5.3 Develop Database	112	11/24/19	3/14/2020
5.5 Deploy Application	21	3/15/2020	4/4/2020
6.0 Testing	14	4/5/2020	4/18/20
7.0 Close Out	7	4/19/2020	4/25/2020

Table 5. Work Breakdown Structure

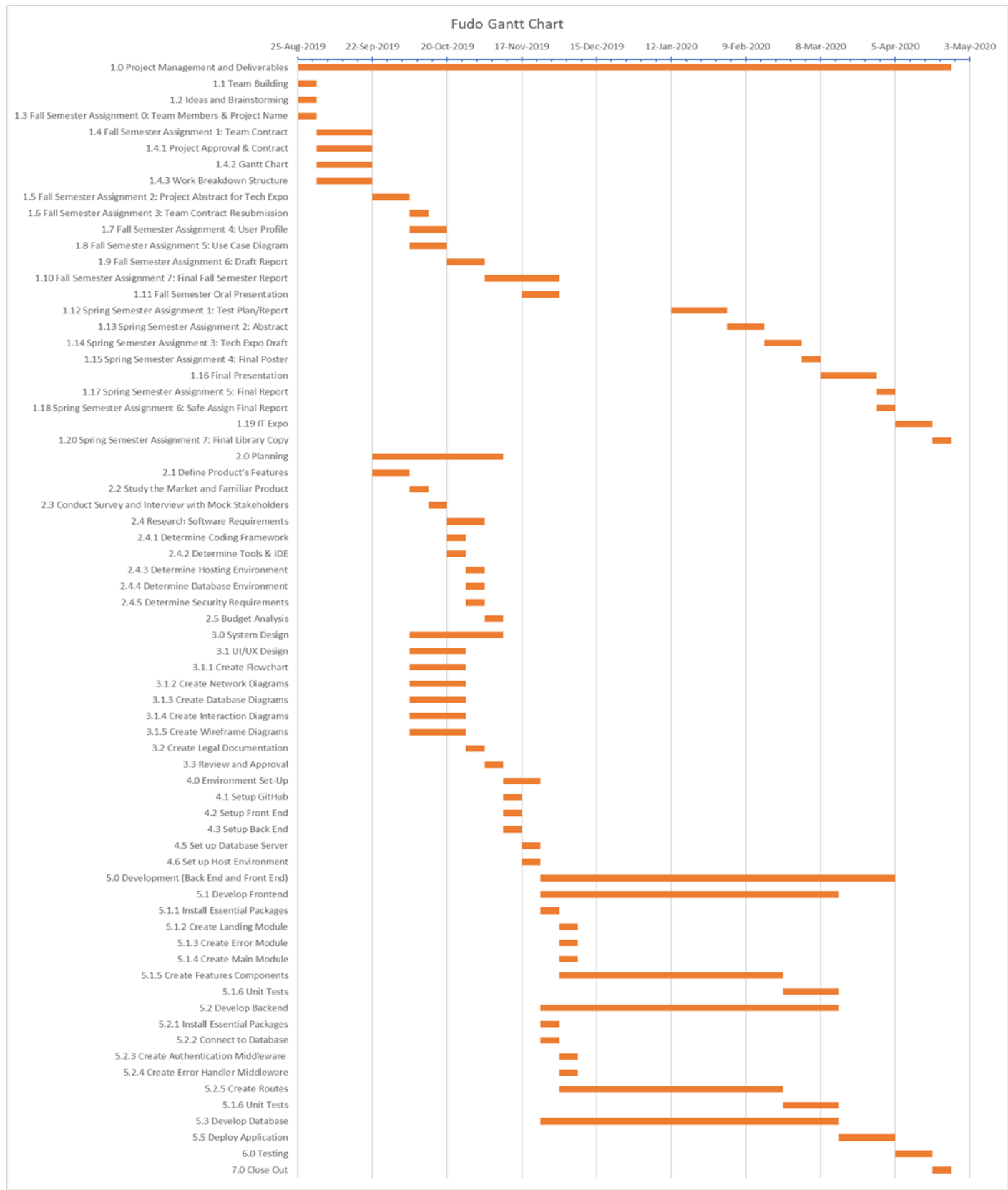


Figure 2. Gantt Chart

When creating Fudo, the team wanted to focus on the user's experience first. This ideology came from the original problem that Fudo aims to solve regarding user experience and searchability when finding new recipes. When designing Fudo, the dev team wanted to make sure everyone had the ability to search and view recipes even with no account signed in. This design requirement will serve well for a quick recipe inquiry as a user generally does when cooking. It would also help potential users to have a better understanding of the application and motivate them to come back to Fudo as a registered user for extended functionalities.

When a user is signed in, minimalistic design requirements limit the Fudo app to three main pages: "Browse", "Create, and "myRecipeBook". This design requirement ensures that the users' experience is driven towards their goals; whether that is finding recipes, creating new ones, or reusing their favorite existing ones. In order to meet these goals and design requirements, team Fudo will be utilizing the GitHub project board for task management. This ensures all team members can view each moving piece of the Fudo app and follow goals to completion. Weekly meetings have also been vital when creating goals for the Fudo application. These meetings ensure that all requirements are being met by each team member and no loose ends go unnoticed. All meetings are documented as well so that references can be made to what has already been discussed at any point in time.

Testing

A variety of testing has been done this spring semester by the Fudo team, as well as beta users that were hand selected in this process. All of Fudo's primary features such as saving recipes, viewing recipes, logging in, creating an account, and creating recipes, were tested rigorously by many users. These users included classmates, friends, family, and peers. In addition to user

testing, a fair number of unit-tests were written as well. These tests gleaned over smaller things that would take time to discover by hand and saved the team time and energy. Bugs caught over this testing period included things such as password requirements when creating an account, using proxies when visiting Fudo, and saving recipes privately. Below is a sample of the data that the team collected when testing Fudo.

Fudo Testing		features tested							
Name	login	logout	create account	create recipe	view recipe	print recipe	view recipe book	signature	
Nick Garver	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Nicholas Garver	
Hai Vu	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Terrell Flowers	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
Kaytlin Lindsey	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	K. P. L.	
Emily Rohe	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Emily Rohe	
Daphne Bauerschmidt	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Daphne Bauerschmidt	

Figure 3. User Testing

TECHNICAL ELEMENTS

Figure 3. Technologies Chart displays the technologies that Fudo will use. Fudo will be hosted on Google Firebase. This platform also includes real time database, which can be utilized to store user information and application data. The front end will be programmed using Angular. Node.js will be used as the application's backend. The application can be views on mobile using the web browser.

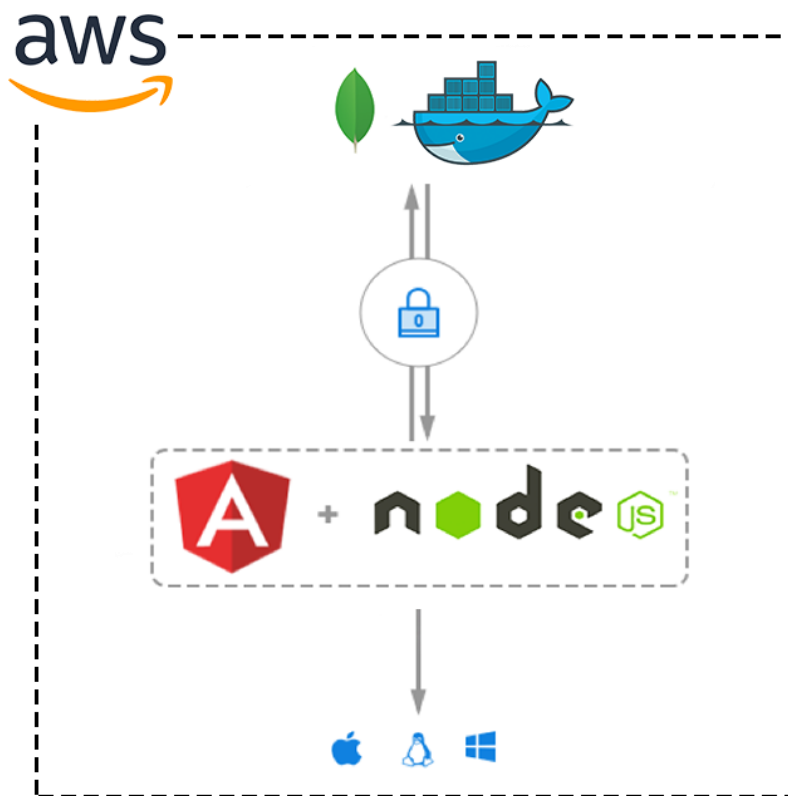


Figure 4. Technologies Chart

Frontend

The team decided on the use of Angular (also referred to as Angular 2+) as the frontend framework in a very early stage because of two main reasons. The first reason was because the team had two software developers, who worked with and were already familiar with the

framework. Therefore, it would reduce the learning curve and improve the speed of development. The second reason was because of Angular's benefits, such as detailed documentation, a great ecosystem of third-party libraries, component-based architecture, bundle size and ahead-of-time compiler, support by Google, etc. Angular was also ranked the second most used technology in the 2018 Stack Overflow survey. (Stack Overflow, 2018) It is equipped with robust components to help developers write readable, maintainable, and easy-to-use code.

Backend

Using Node.js as the core server technology gives the team a great boost by using JavaScript on both the front and the back end. Node.js uses an event-driven non-blocking I/O model that makes it lightweight and efficiency. It will improve the team overall productivity as well, which includes code sharing and reuse, easy knowledge sharing amongst team members, and an immense number of free tools and libraries. Furthermore, Node.js was built upon Google Chrome's V8 runtime, which frequently updated, optimized, and supported by Google. Not to mention that, Node.js was ranked first in the 2018 Stack Overflow survey. (Stack Overflow, 2018)

Database

The team will use the free tier of AWS as well as a Docker container in order to host our web application. MongoDB has been integrated into our docker container as well in order to simplify our deployment process. This combination of popular services will make the storage of private user data such as passwords, private recipes, and saved recipes in "myRecipeBook". The overhead that was used for this application during the development process was minimal and the team did not run into any issues with needing to increase storage space or speed.

Security

Fudo will use JSON Web Token (JWT) as a mechanism to secure and verify the user via JSON data. JWT is an open standard (RFC 7519). It's an encoded string, which is URL safe, and cryptographically signed that defines a compact and self-contained way for securely transmitting information. When a server receives a JWT, it can guarantee the data it contains can be trusted because it is digitally signed by the source. However, JWT only guarantees data ownership but not encryption; therefore, a JWT needs to be stored in a safe place inside the user's browser. JWT is a very popular standard that can be used to trust requests by using signatures, and exchange information between parties.

VISUALS

User Interface

User experience is something the Fudo team takes very seriously. The team aims to produce a unique and simple application with a modern look and feel using recent technology. The application should be straight forward and easy to use. Users should not experience any difficulty while using the Fudo application, as users have the simple choice of browsing for recipes, viewing their current recipe, or creating a new recipe. Every interface and its functionalities are backed by detailed thought put into the UX. Nevertheless, the team will take note of any improvement suggestions. The Figures below show the current design for the User Interface. It highlights some functionalities of the Fudo application, which include searching for a recipe, logging into the application, creating the recipe, viewing a recipe, and managing the users.

Search Recipe Page

Searching for recipes is one of the most important functionalities of Fudo. Because of this, the application purposely sets the search recipe page as the initial page that the user will see upon visiting the application. The users will be able to search for recipes by typing a tag, name, or ingredient without logging in to the application. As an alternative they can choose to continue scrolling down the page to look for other interesting recipes that catch their eyes. **Figure 4. Search a Recipe** demonstrates what the opening screen will look like.

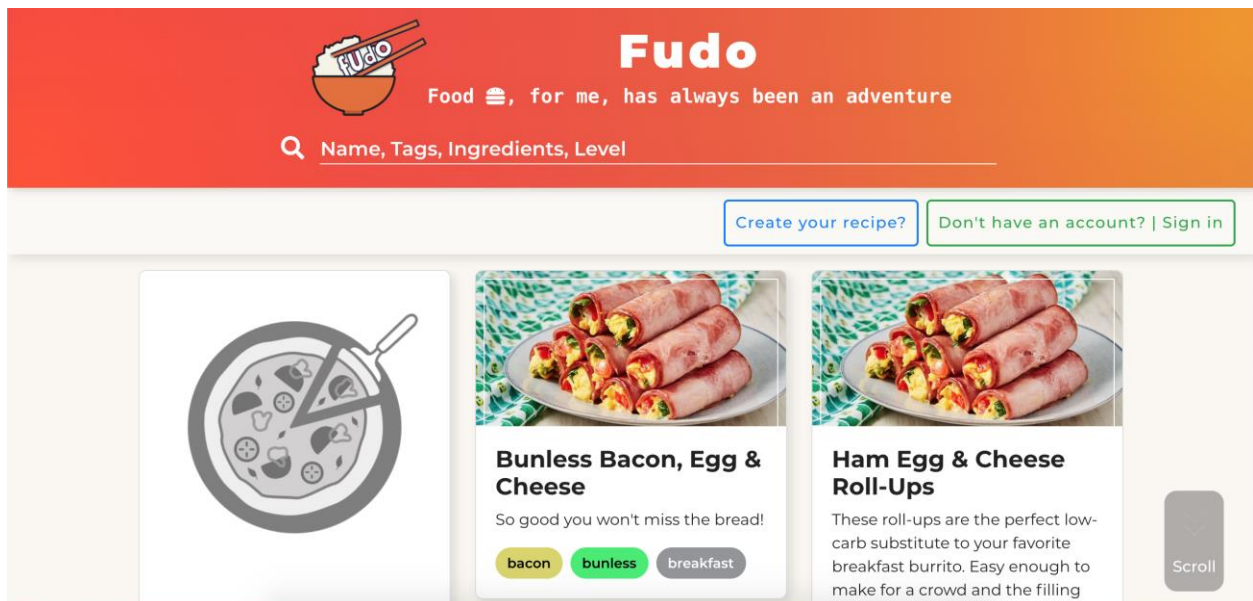


Figure 5. Search a Recipe

Detail Recipe Page

When the user has found an interesting recipe, the user can click into the recipe card to open a detailed view of that recipe. The detail recipe page will present complete information of a recipe, which includes the recipe's name, picture, description, ingredients, directions, and an

optional tip that the user has provided, as well as the user who created it. **Figure 5. Detail Recipe Page** demonstrates what this view will look like.

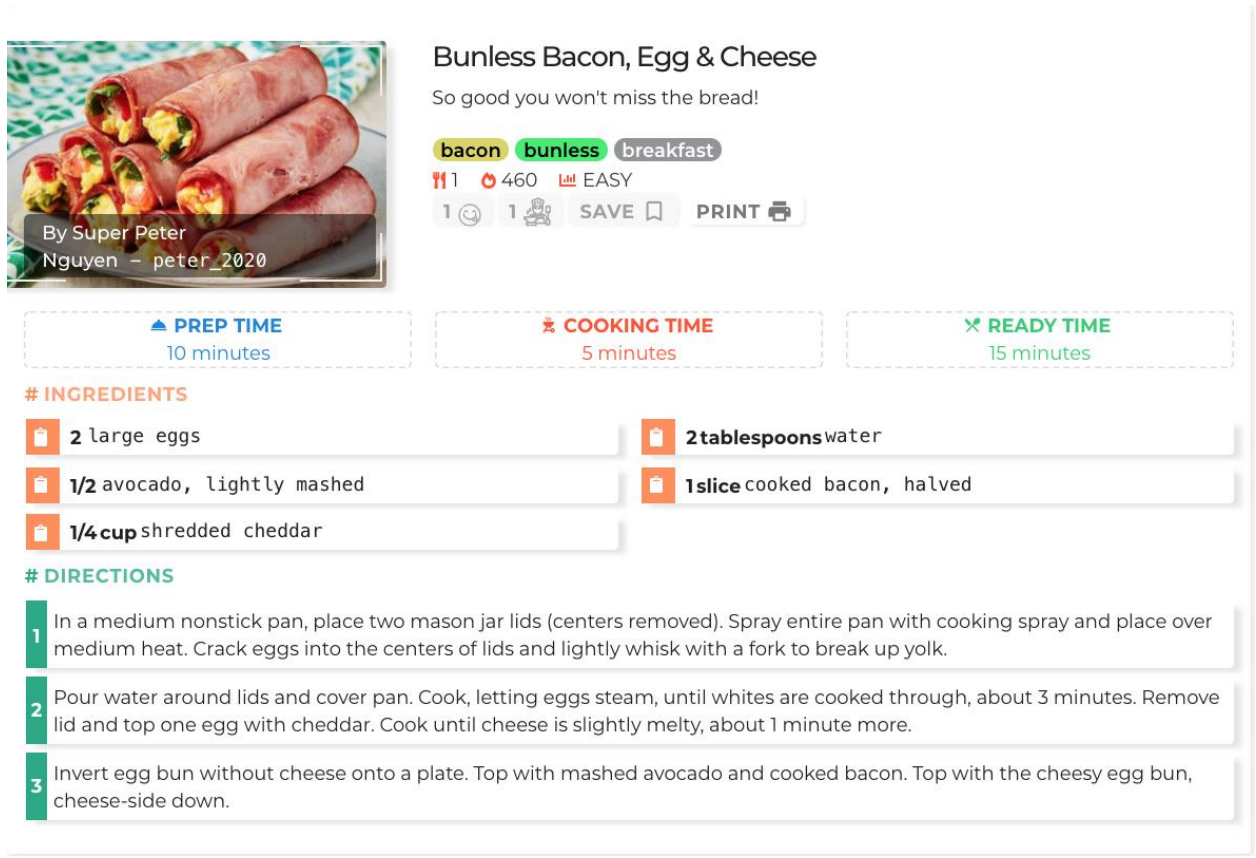


Figure 6. Detail Recipe Page

Login Modal

If a user is interested in a recipe and wants to store it for future use, Fudo also provides a save recipe function. The user must have an account and log in to the application in order to use

this functionality. **Figure 6. Login Modal** shows how the user will login to Fudo. Users will be required to authenticate themselves by inputting their username and password.

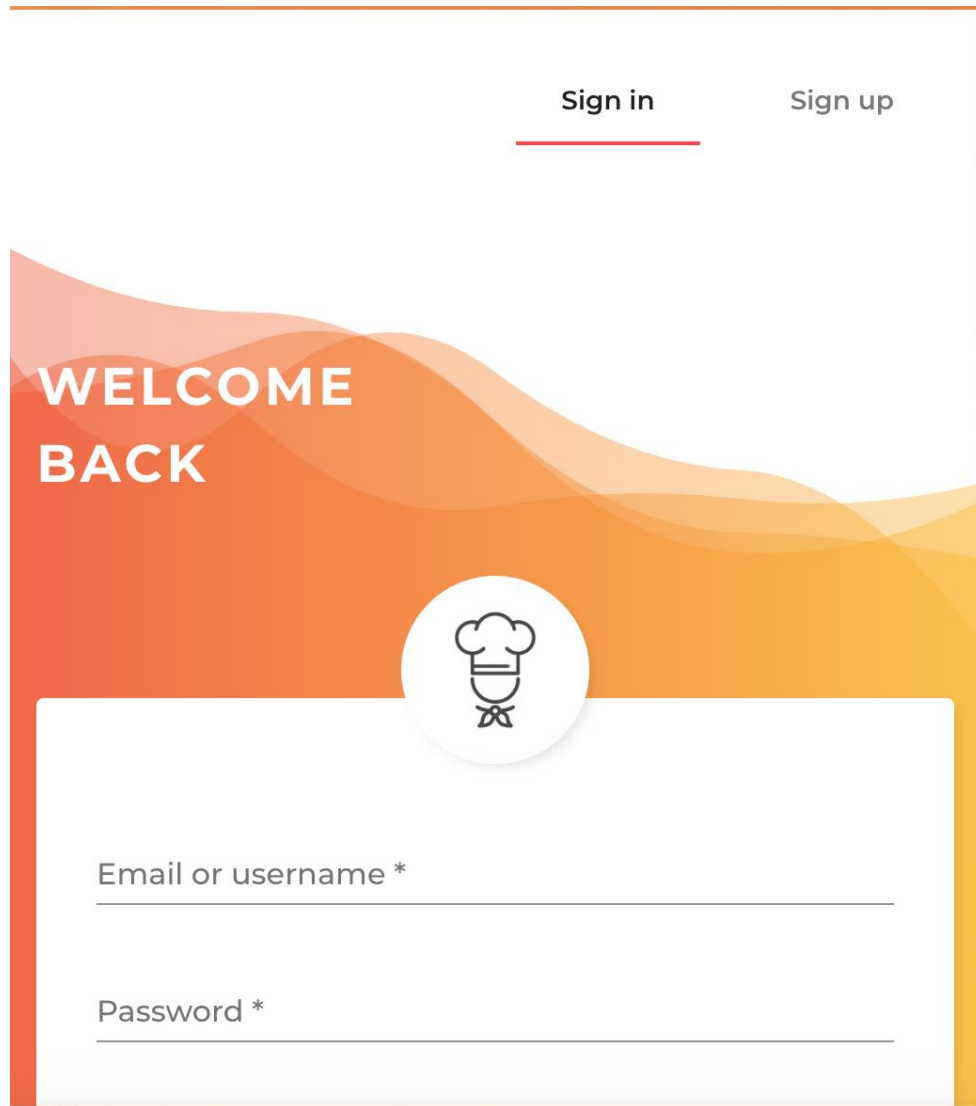


Figure 7. Login Modal

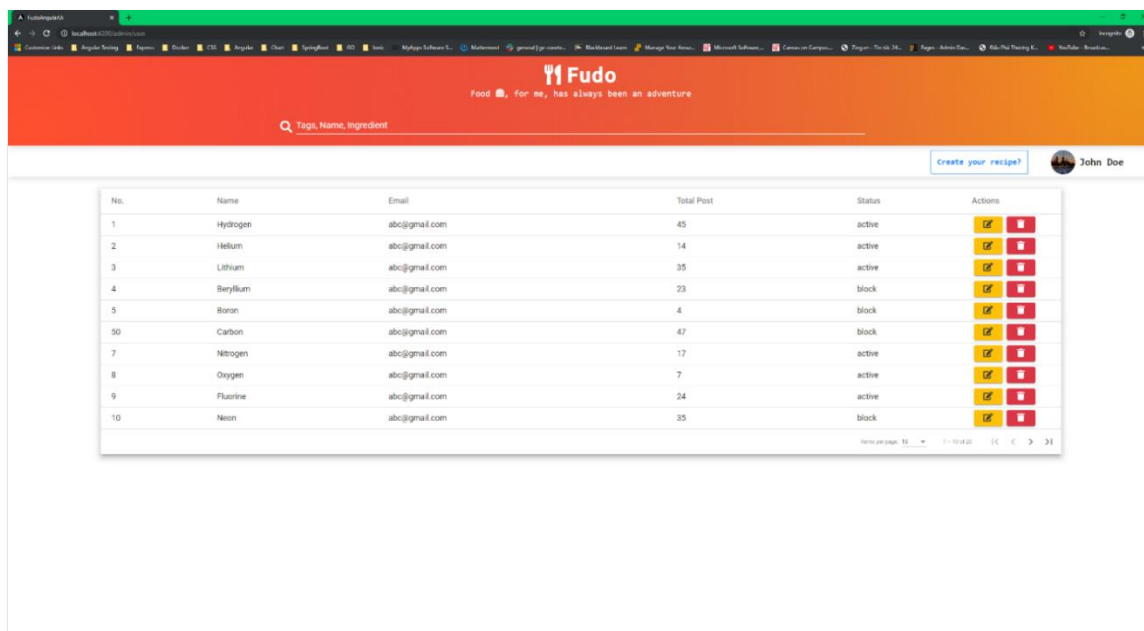
Create Recipe Page

For any user who feels inspired to create their own recipe, Fudo offers a creation feature to help food lovers keep their recipes in a safe place. This action may be done if the user chooses to save and perfect the recipe over time or simply wants to share their creation with others. **Figure 7. Create Recipe** illustrates what the user will see when creating a new recipe.

Figure 8. Create Recipe

Admin Page

Finally, to help to manage the application without accessing the data directly in the database, Fudo also comes with an Admin View Feature which allows the Fudo admins to manage user data more efficiently. The feature is presented in **Figure 8. Admin Page** below.



The screenshot shows the Fudo Admin Page. At the top, there is a navigation bar with the Fudo logo and the tagline "Food for me, has always been an adventure". Below the navigation bar is a search bar with the placeholder text "Tags, Name, Ingredient". To the right of the search bar is a button labeled "Create your recipe" and a user profile icon for "John Doe".

The main content area displays a table with the following columns: No., Name, Email, Total Post, Status, and Actions. The table contains 10 rows of data, each representing a user profile. The "Actions" column for each row contains two buttons: a yellow button with a checkmark icon and a red button with a trash can icon.

No.	Name	Email	Total Post	Status	Actions
1	Hydrogen	abc@gmail.com	45	active	✔ ✖
2	Helium	abc@gmail.com	14	active	✔ ✖
3	Lithium	abc@gmail.com	35	active	✔ ✖
4	Beryllium	abc@gmail.com	23	block	✔ ✖
5	Boron	abc@gmail.com	4	block	✔ ✖
50	Carbon	abc@gmail.com	47	block	✔ ✖
7	Nitrogen	abc@gmail.com	17	active	✔ ✖
8	Oxygen	abc@gmail.com	7	active	✔ ✖
9	Fluorine	abc@gmail.com	24	active	✔ ✖
10	Neon	abc@gmail.com	35	block	✔ ✖

At the bottom right of the table, there is a pagination control showing "Items per page: 10" and "1 - 10 of 10".

Figure 9. Admin Page

CONCLUSION

Fall Semester 2019

Fudo was an exciting project to work on. The team recognized the need for an upgrade to the way recipes are handled and shared among people in this internet era. Internet users have integrated online resources into their daily lives, but current food sharing platforms do not take full advantage of this, which is what Fudo aims to do. The development team knew right away that this was the key issue they wanted to tackle and in order to move quickly in the development phase, the team decided to utilize the free tier of Google Firebase. Angular and Node.js were also chosen for front end and backend development because of its short learning curve and vast support community. In addition, if there is time to invest, Ionic will be used as a framework to port the application to mobile.

During the developmental phase of Fudo multiple issues rose up such as long image load times, confliction between the UX and UI prototypes, and lack of experience in Project management. Through trial and error, the Fudo members have grown together in multiple areas including technical knowledge, properly documenting the project, and a quality lesson about putting UX before UI. In the spring semester team Fudo will continually work towards completing deliverables and listening to any improvement feedback. Next semester will be intensive in the development phase for Fudo and the team aims to remain focused and bring forth the best product possible.

Spring Semester 2020

With the onset of Covid-19, we had to shift gears in order to assure that we were able to meet deadlines that were given to us. We could not meet in public due to the Shelter in Place order that was issued for the state, but we met on Webex to keep our flow going during this time.

Team Fudo worked tirelessly in order to assure that bugs in the application were fixed and that we were ready to present in April. In order to assure that we were ready to show off our application, we created some logos that will make Fudo stand out from the crowd. The logo is based on a bowl of rice and a pair of chopsticks with Fudo in the middle. We decided that our main color would be orange since it was a color that we had been using in our drafts and it stuck.

Future recommendations

Ultimately, we believe that Fudo has been a successful project. With the two semesters that we were given, we were able to put out a beautiful and functional product. If we had more time to keep building Fudo, we would add mobile versions to the Apple app store and Google Play store. We would also like to add more functionality such as the ability to comment on recipes and a feature that would allow users to create a shopping list from these applications.

Appendix A. References

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