

SW Engineering CSC648 Spring 2021

Gator Grub - Team02

Patricia Louise Sarno - Team Lead - psarno@mail.sfsu.edu

Erik Chacon - GitHub Master

Danny Collan - Front End Lead

Saloni Mahat - Front End Team Member

Affaan Ghazzali - Back End Lead

Edmund Manzano - Back End Team Member

Milestone 2

19 March 2021

History Table	
Date Submitted	Date Revised after instructor(s) comments
19 March 2021	

1. Executive Summary

The motivation behind Gator Grub is to make it easier for San Francisco State University students, staff, and faculty to order food using a delivery/pick up service dedicated specifically to the SFSU Campus. We wanted to create a service that is safer and more convenient for both the students, staff, and faculty on campus and the drivers delivering the food. This is critical because students, staff, and faculty are so preoccupied with their work that they need anything more convenient without having to worry about their safety. We also wanted to provide local restaurants with an opportunity to expand their business.

To ensure the safety of San Francisco State University students, staff, and faculty, the drivers employed would be SFSU working students who will register and verify their accounts using only SFSU email. By doing this, drivers will already have access to the buildings by being a student and the delivered food will be handed by a fellow student. In addition, student drivers would have a more convenient and flexible work that fits with their school schedule. A variety of restaurants will also be able to register and sell a variety of food options to the students, enabling restaurants to grow their business.

Our team consists of six San Francisco State University Students, each with uniquely diverse and creative minds. They have a clear sense of purpose and being SFSU students themselves, they understand its customers expectations. Each team member works effectively to achieve the teams goals and objectives and puts dedication in continuously learning and improving the overall team performance.

2. List Of Main Data Items and Entities

a. Users

i. Administrators

1. **ID:** ID for admin user
2. **Full Name:** Full name of Admin user
3. **Username:** Username for admin to log in
4. **Password:** Password for admin to log in

ii. Customers

1. **Registered:** User who is already signed in and has an account

- 1.1. **ID:** ID for registered user
- 1.2. **Full Name:** Full name of registered user
- 1.3. **Email:** SFSU email of registered user
- 1.4. **Phone Number:** Phone number of registered user
- 1.5. **Address_1:** Address choice for registered user
- 1.6. **Address_2:** Address choice for registered user
- 1.7. **Address_3:** Address choice for registered user
- 1.8. **Username:** Username for registered user to log in
- 1.9. **Password:** Password for registered user to log in
2. **Unregistered:** User who doesn't have an account or isn't logging in at the moment. They are able to create an order and be asked to register if the order is followed through

iii. **Delivery Driver**

1. **ID:** ID for driver
2. **Full Name:** Full name for driver
3. **Email:** Email of driver
4. **Phone Number:** Phone number of driver
5. **Username:** Username for driver to log in
6. **Password:** Password for driver to log in

iv. **Restaurant Owner**

1. **ID:** ID for restaurant owner
2. **Full Name:** Full name of restaurant
3. **Email:** Email of restaurant owner
4. **Phone Number:** Phone number of restaurant owner
5. **Username:** Username for restaurant owner to log in
6. **Password:** Password for restaurant owner to log in
7. **Restaurant ID:** ID of the owners restaurant

b. **Entity**

i. **Restaurant**

1. **ID:** ID of restaurant
2. **Name:** Name of restaurant
3. **Address:** Address of restaurant
4. **Latitude:** Latitude coordinate of restaurant

5. **Longitude:** Longitude coordinate of restaurant
6. **Phone Number:** Phone number of restaurant
7. **Food Type:** Food type of restaurant
8. **Price Level:** Price level of restaurant (e.g. \$ - \$\$\$)
9. **Status:** Approval status of restaurant by admin

ii. Restaurant Menu

1. **ID:** ID of restaurant menu item
2. **Restaurant ID:** ID of restaurant the menu belongs to
3. **Food Item Name:** Name of menu item
4. **Description of Food:** Description of menu item
5. **Image:** Image of menu item
6. **Price:** Price of menu item

iii. Food Types

1. **ID:** ID of food type
2. **Type:** The type of foods available (e.g. Indian, Mexican, Japanese)

iv. Order

1. **ID:** ID of order (order number)
2. **Restaurant ID:** ID of restaurant the order belongs to
3. **Customer Name:** Name of customer who placed the order
4. **Driver Name:** Name of driver who accepted the order to deliver
5. **Date:** Date the order was placed
6. **Time:** Time the order was placed
7. **Status:** Status of order (e.g. delivered or in progress)
8. **Total:** Total price of order
9. **Destination Address:** Destination address the order will be delivered to

3. Functional Requirements - Prioritized

a. Priority 1

i. *Administrators*

1. Administrators shall have the ability to review and approve restaurant registration
2. Administrators shall have the ability to review and approve media posts by restaurants
3. Application shall provide registered and unregistered users the map and the locations of the nearest establishments

ii. *Registered Users*

4. Registered users shall have the ability to search food through different categories such as cuisines and restaurants
5. Registered users shall have the ability to log in to their account and place an order
6. Registered users shall have the ability to choose food from the menu of specific restaurant
7. Registered users shall have the ability to specify the location of delivery in SFSU campus
8. Registered users shall receive notifications on the update of their order
9. Registered users shall be able to specify certain options through comments on an order (e.g. no onions on a burger). Restaurants will be held to their comments and these comments will be displayed as part of the order, rather than something extra
10. Registered users shall be able to reset their password if they forgot it

iii. *Unregistered Users*

11. Unregistered users shall have the ability to search food through different categories such as cuisines and restaurants
12. Unregistered users shall have to ability to place an order and without logging in and be prompted to register in order to place order (lazy registration)

13. Unregistered users shall have the ability to choose from the menu of specific restaurant

14. Unregistered users shall be required to register before placing an order

iv. *Restaurant Owner*

15. Restaurant owners shall have the ability to register their restaurants into the application

16. Restaurant owners shall be able to reset their password if they forgot it

v. *Delivery Driver*

17. Drivers will be required to register their information before becoming a driver

18. Delivery drivers shall be able to reset their password if they forgot it

b. Priority 2

i. *Administrator*

19. Administrators shall provide a way to sort and filter food choices to make it easier for registered/unregistered users to find food

ii. *Registered User*

20. Registered users shall have the ability to add desired menu items to checkout and later on be able to place their orders

iii. *Unregistered User*

21. Unregistered users shall have the ability to add desired menu items to checkout and later on be able to place their orders

iv. *Restaurant Owner*

22. Restaurants shall have the ability to update the estimated time of an order being ready for pick up or drop off. This can only vary by a standard deviation of five minutes

v. *Delivery Driver*

23. Delivery drivers will be able to update estimated time of arrival to delivery location by sharing their location with the application

c. Priority 3

i. *Administrator*

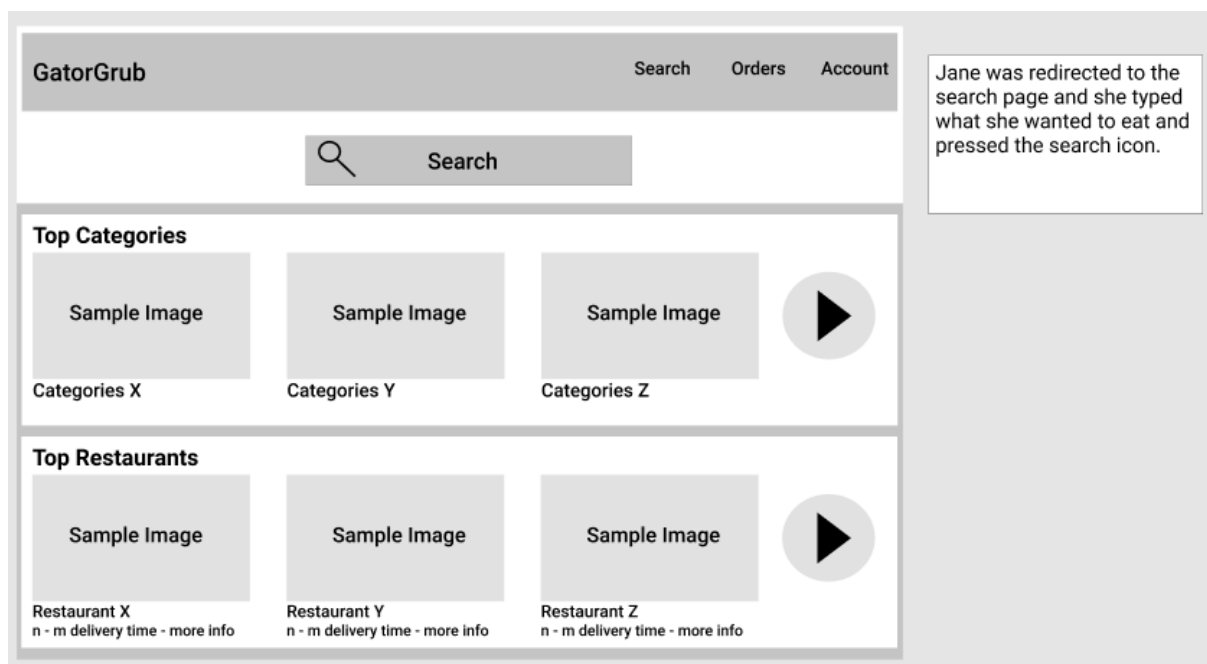
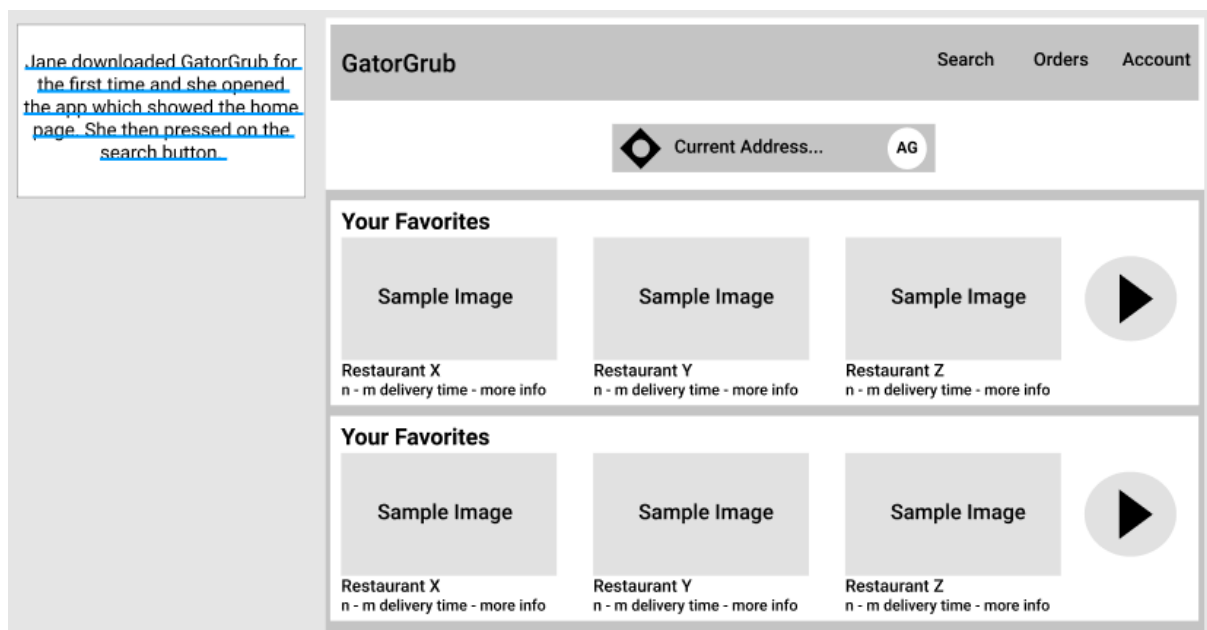
- 24. Administrators shall provide registered users a way to communicate with the driver regarding the status of their order
- 25. Administrators shall make the application display trends of favorite restaurants and recent/common orders on the application
- 26. Administrators shall provide recommended restaurants that have reviews higher reviews and similar food types to registered and unregistered users

ii. *Registered User*

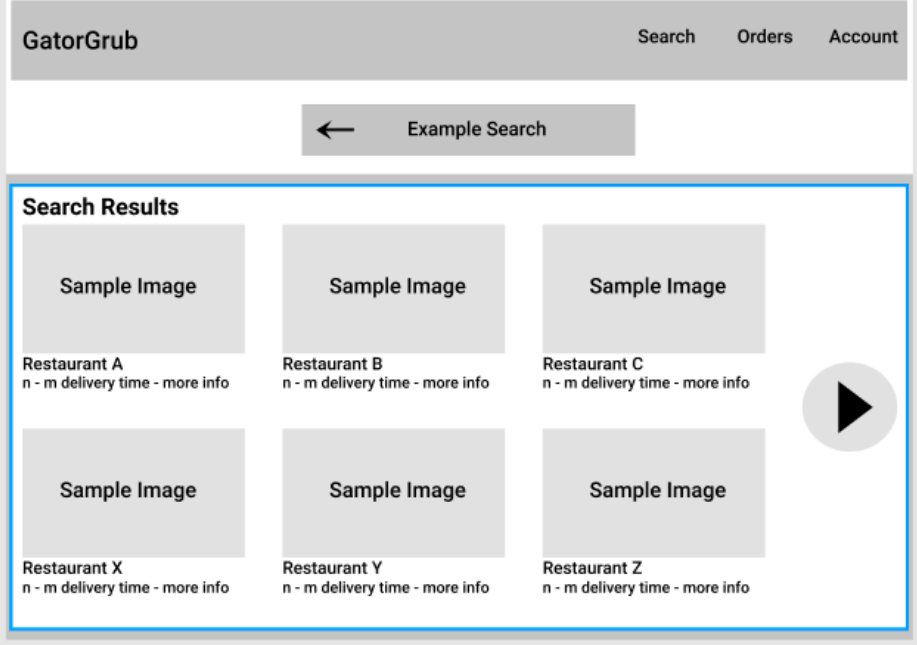
- 27. Registered users shall have a way to save past orders for a quick and easy order in the future
- 28. Registered users shall be able to look at past orders to review order details such as food order, total price, tip, etc.
- 29. Registered users shall have the ability to leave reviews on the performance of the transaction

4. UI Mockups and Story

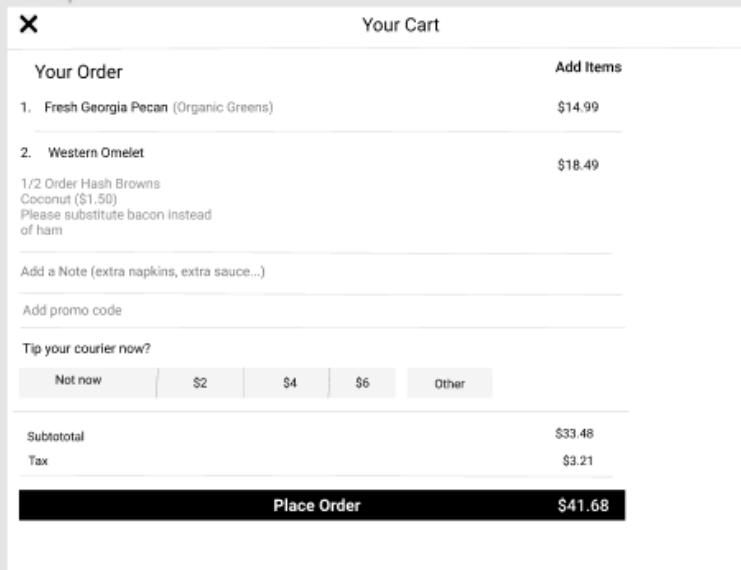
Storyboard 1: Ordering Food:



After she pressed the search icon, the search results appeared and she added the food to her cart.



Desktop - 1



After Jane chose her food and added to her cart. When she was ready she pressed on the checkout button.

After pressing the checkout button, it redirected the page to the Registration page.

Registration Page

[Home](#)

GatorGrub

Member Registration

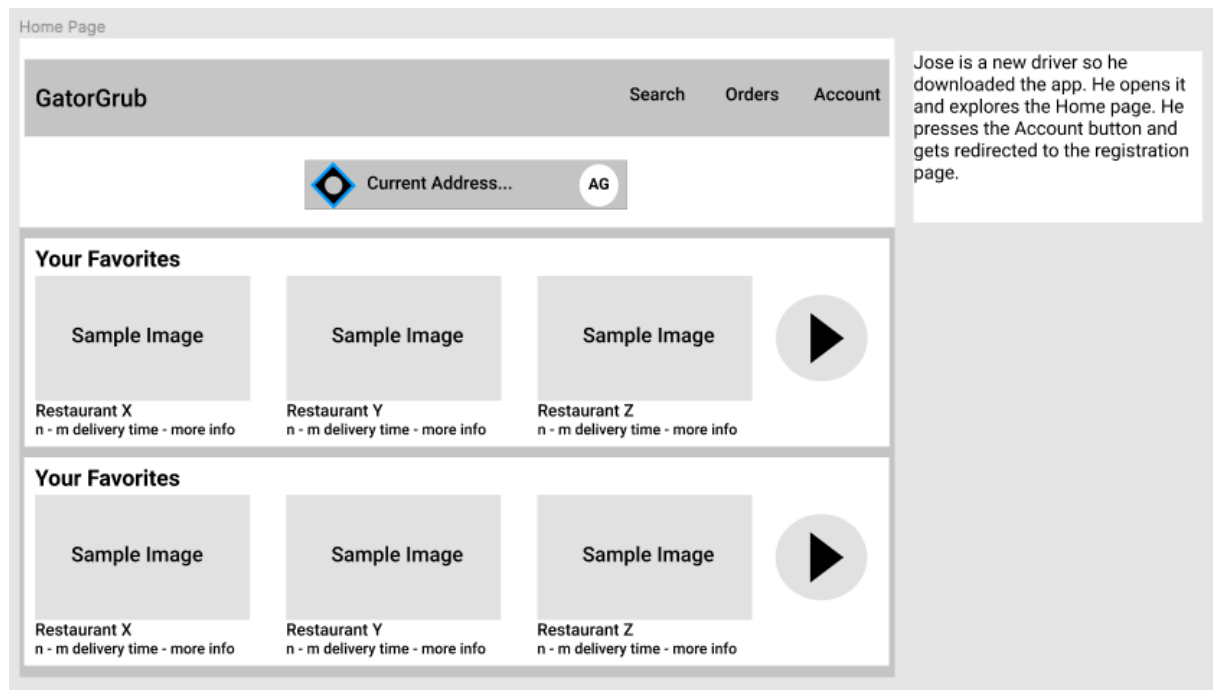
Username

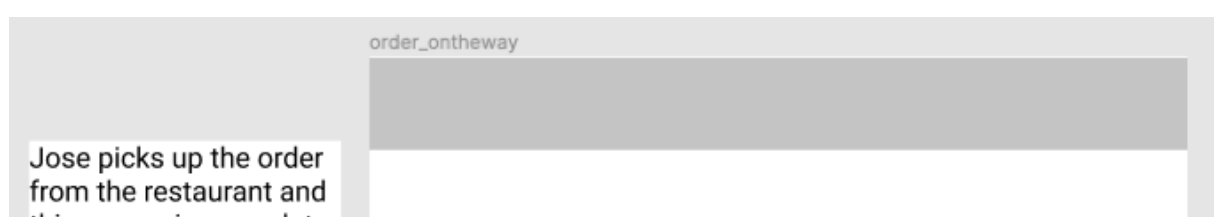
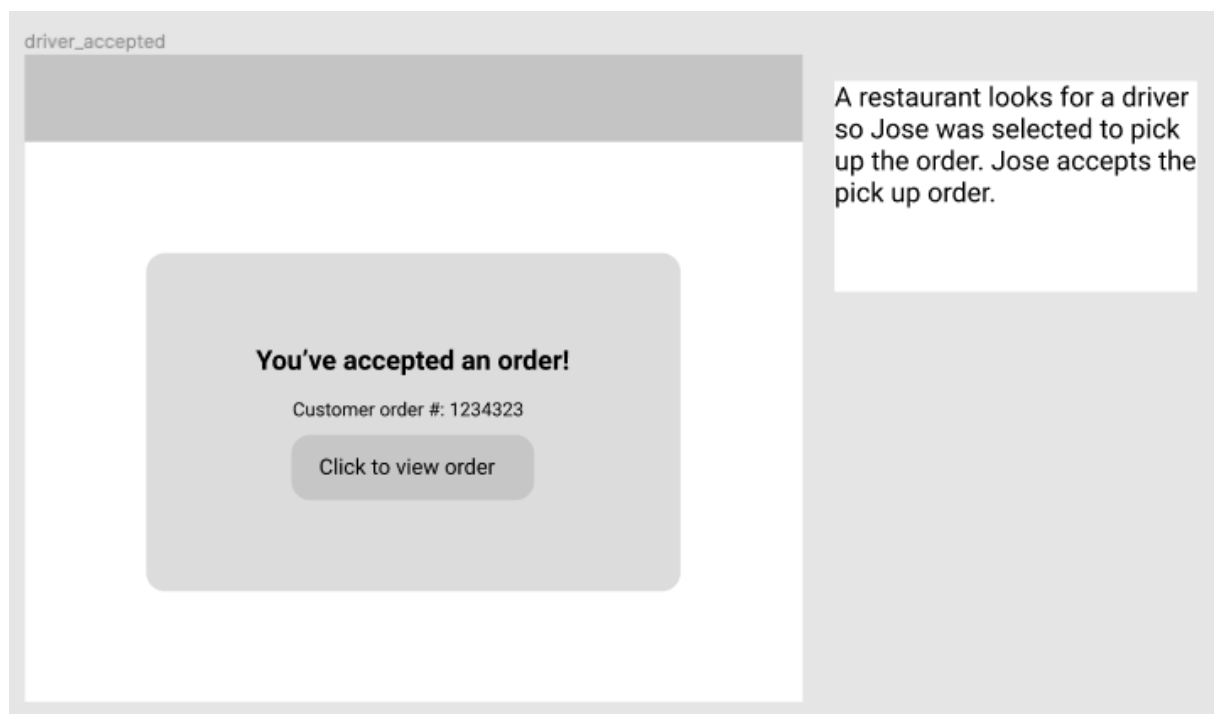
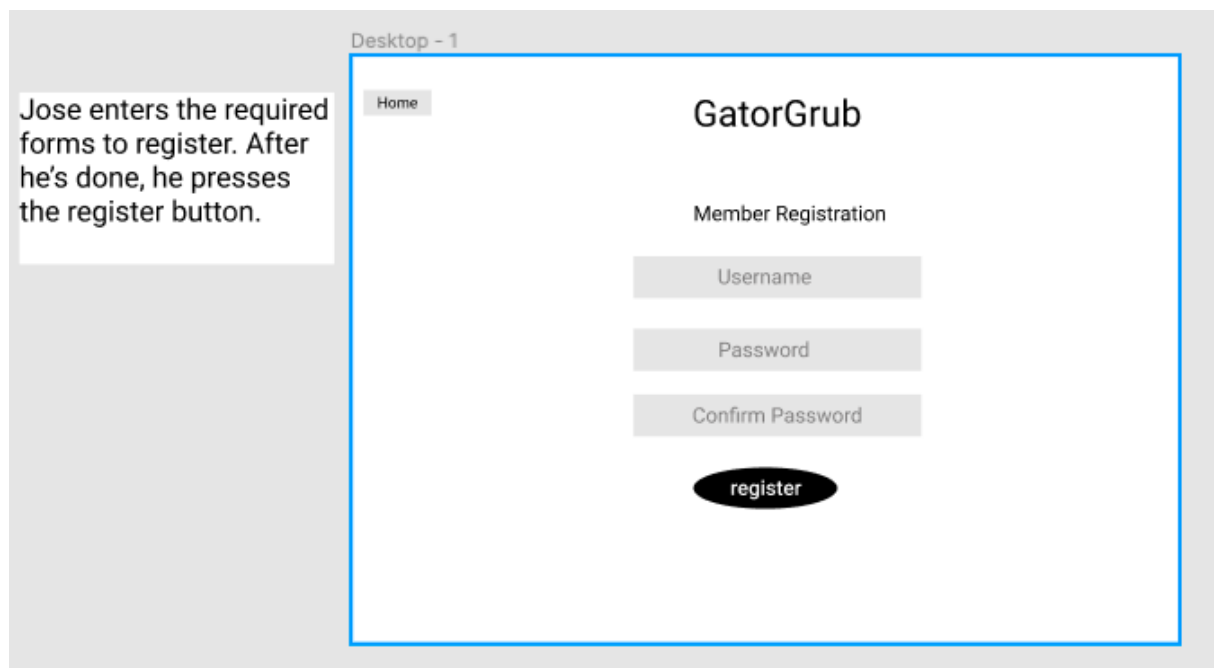
Password

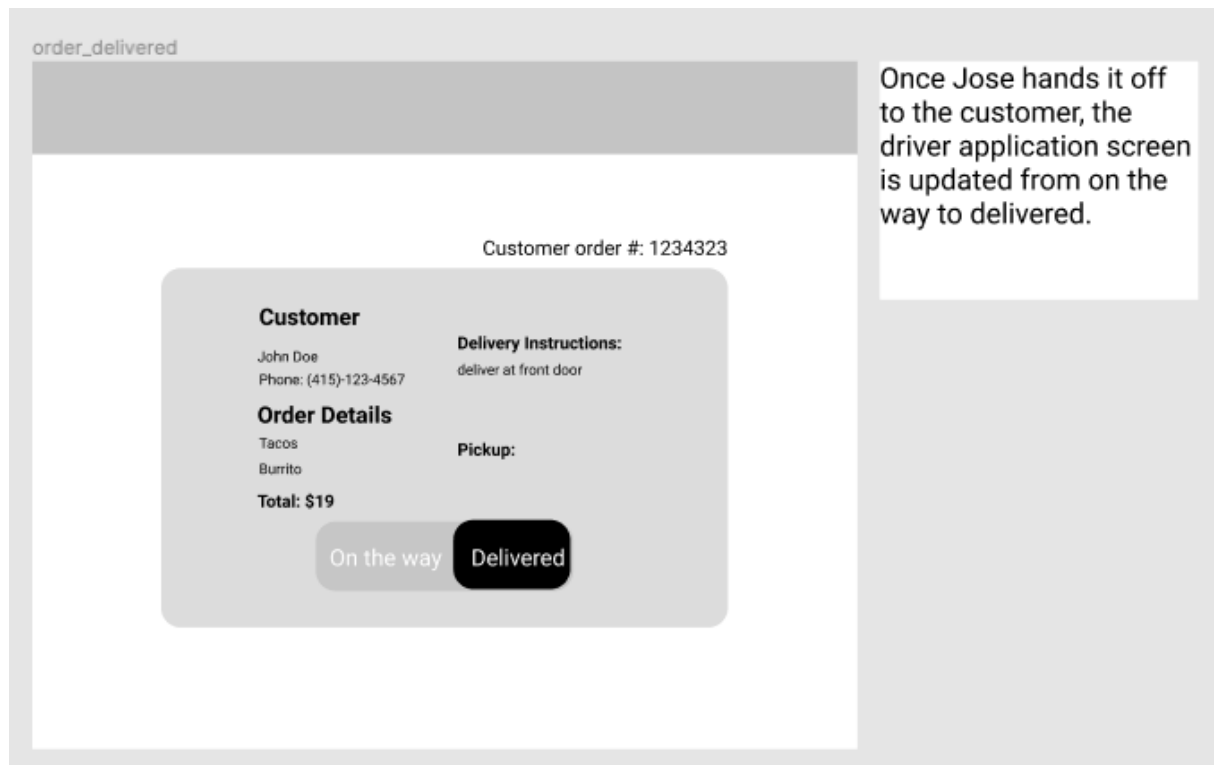
Confirm Password

register

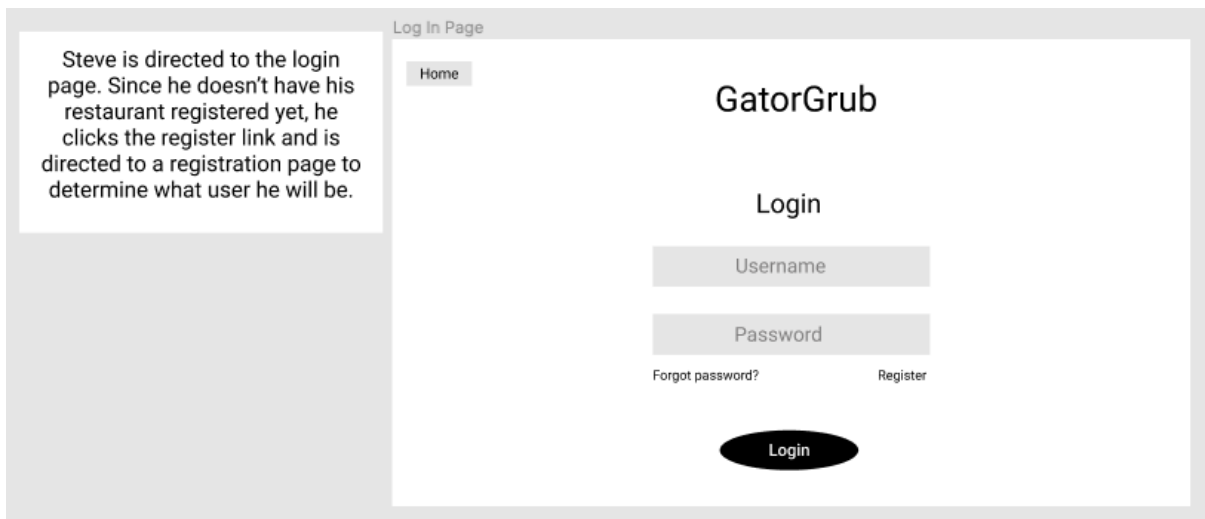
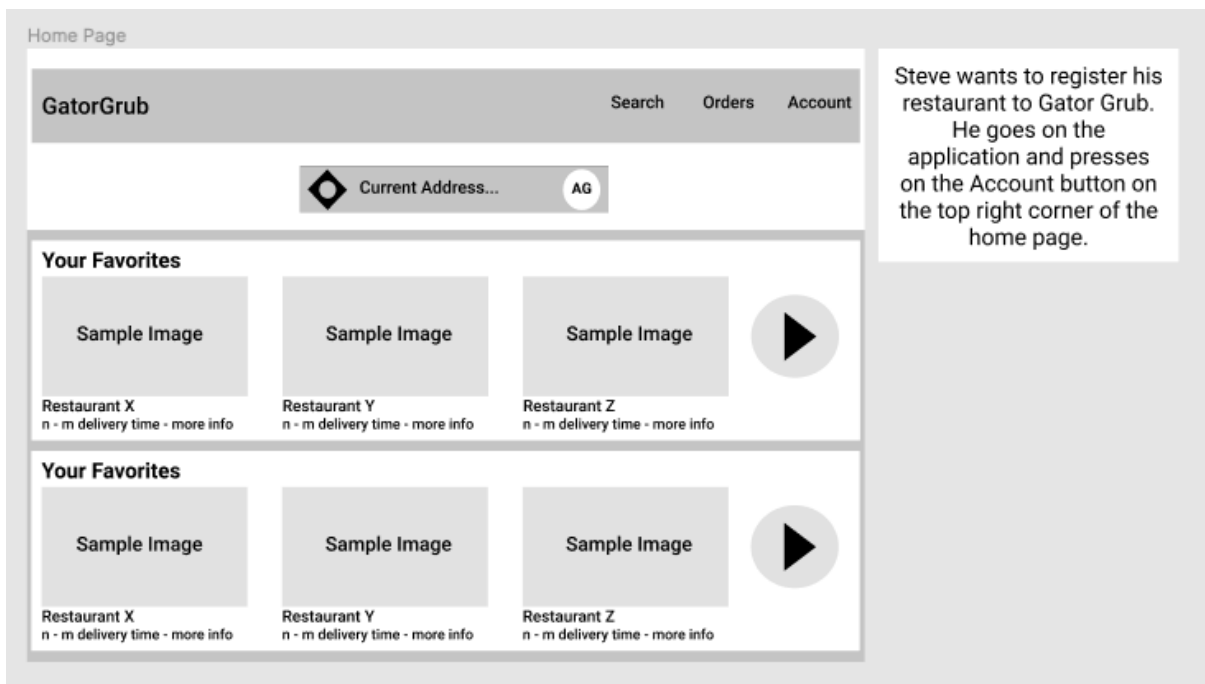
Storyboard 2: Delivering Food:







Storyboard 3: Registering A Restaurant:



Log In Page

Home

GatorGrub

Who are you?

SFSU Student/Faculty/Staff

Delivery Driver

Restaurant Owner

Next

Steve picks that he is a Restaurant Owner.

Restaurant Registration

Home

Steve types in his required restaurant information and then inputs creates his username and password for log in.

Restaurant Name

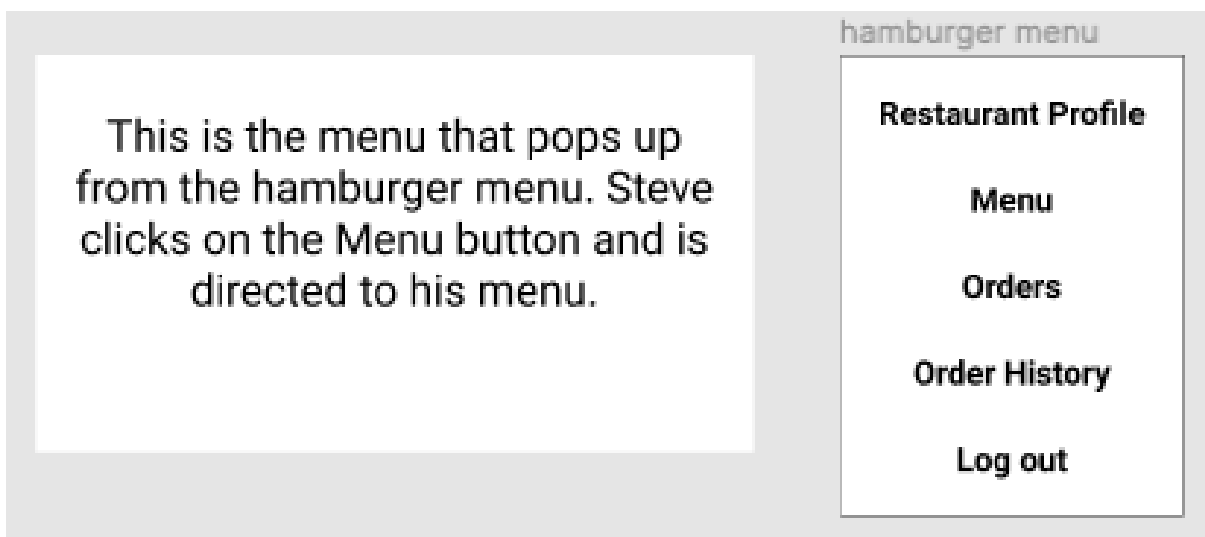
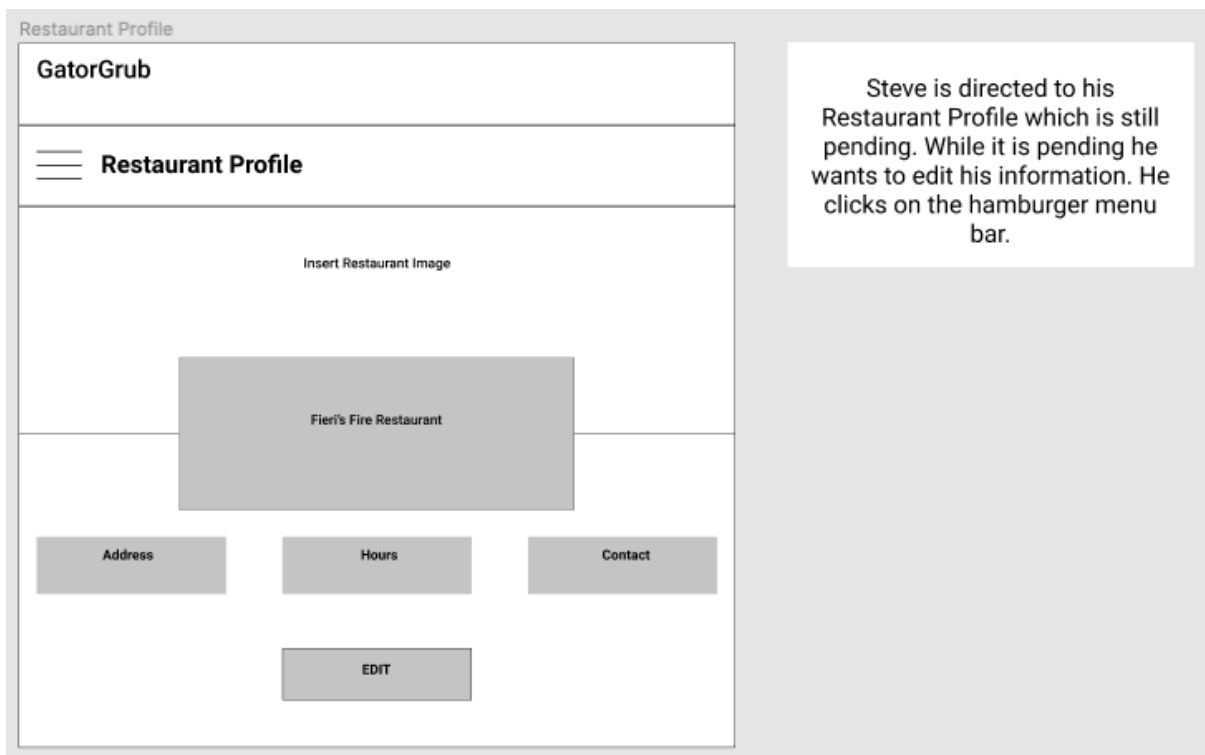
Address

Username

Password

Confirm Password

register



Restaurant menu

GatorGrub

Menu

Build Your Menu

▼ Breakfast

Most Popular

All Brunch

ADD CATEGORY

▶ Lunch

▶ Dinner

ADD CATEGORY

Ham Omelette

Popular Breakfast

ADD ITEM

Ham Omelette

Item description

Price: \$8

Insert Food picture

Steve is directed to this menu page where he can edit his menu items and add pictures for his menu items.

Orders Page

Once Steves Restaurant is approved he is able to go to the hamburger drop down menu, select orders, and view all the pending orders from his new customers.

GatorGrub

Orders

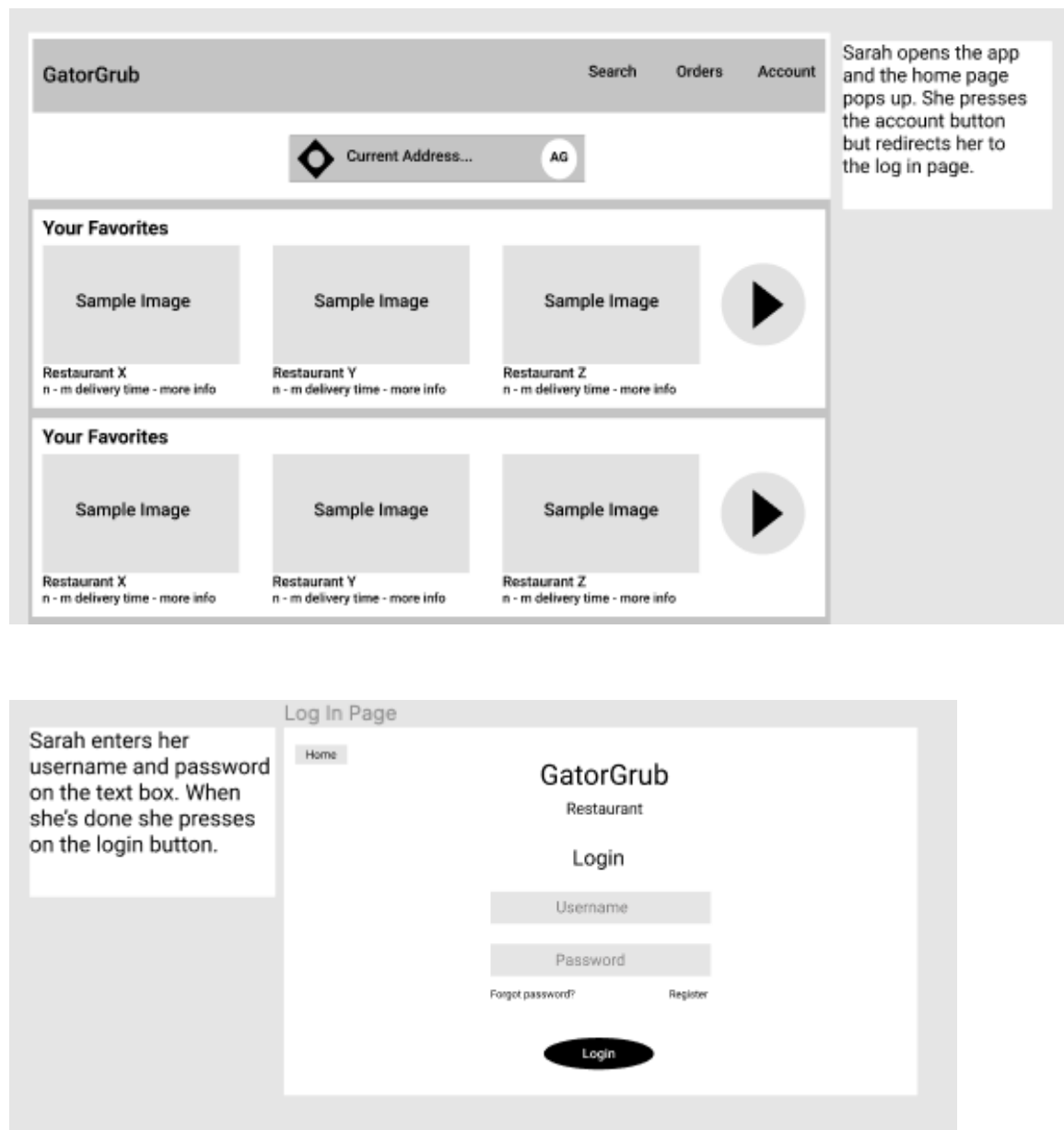
NEW ORDERS

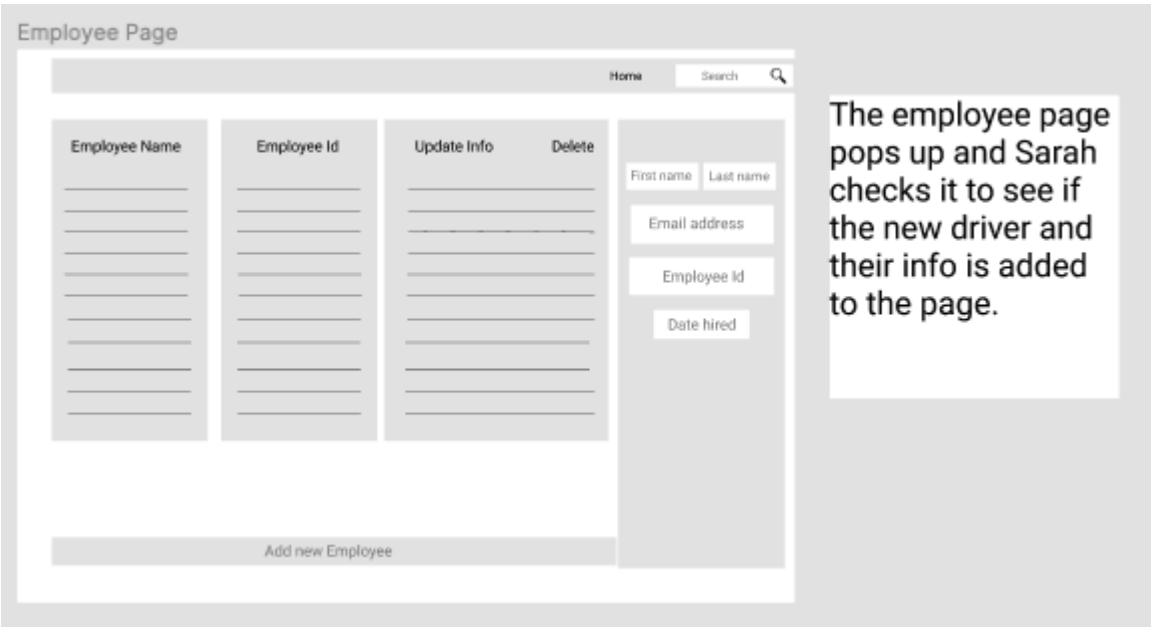
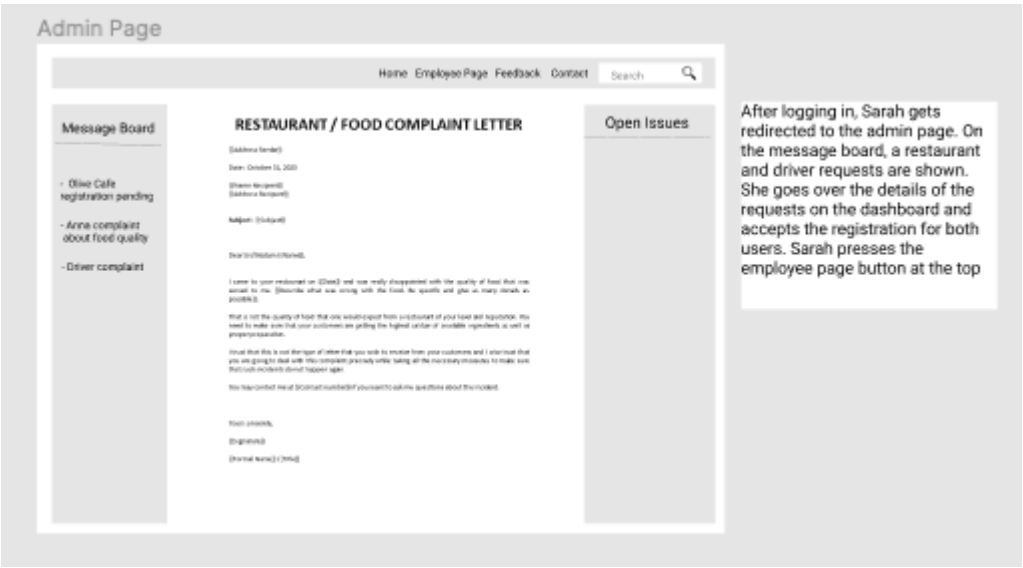
Order Number	# of Items	Time	Status	
123456	3	12:34PM	PENDING	ACCEPT
789101	2	12:36PM	PENDING	ACCEPT
694201	1	12:40PM	PENDING	ACCEPT

IN PROGRESS

Order Number	# of Items	Estimated Pickup Time	Status	
031821	2	12:14PM	PICKUP READY	NOTIFIED
202103		12:20PM	PREPARING	NOTIFY
180900		12:24PM	PREPARING	NOTIFY

Storyboard 4: Approving Restaurant Registration:





5. High Level Architecture, Database Organization Summary OnlyDatabase Organization

a. Users

i. Administrators

#	Column	Type
1	ID	BIGINT(40)
2	Full Name	TEXT
3	Username	TEXT
4	Password	TEXT

ii. Registered Customers

#	Column	Type
1	ID	BIGINT(40)
2	Full Name	TEXT
3	Email	TEXT
4	Phone Number	TEXT
5	Address_1	TEXT
6	Address_2	TEXT
7	Address_3	TEXT
8	Username	TEXT
9	Password	TEXT

iii. Delivery Driver

#	Column	Type
1	ID	BIGINT(40)
2	Full Name	TEXT
3	Email	TEXT
4	Phone Number	TEXT
5	Username	TEXT
6	Password	TEXT

iv. Restaurant Owner

#	Column	Type
1	ID	BIGINT(40)
2	Full Name	TEXT
3	Email	TEXT
4	Phone Number	TEXT
5	Username	TEXT
6	Password	TEXT
7	Restaurant ID	BIGINT(40)

b. Entity

i. Restaurant

#	Column	Type
1	ID	BIGINT(40)
2	Name	TEXT
3	Address	TEXT
4	Latitude	BIGINT(40)
5	Longitude	BIGINT(40)
6	Phone Number	TEXT
7	Food Type	TEXT
8	Price Level	TEXT
9	Status	TEXT

ii. Restaurant Menu

#	Column	Type
1	ID	BIGINT(40)
2	Restaurant ID	BIGINT(40)
3	Food Item Name	TEXT
4	Description Of Food	TEXT
5	Image	*FILE STORAGE*
6	Price	TEXT

iii. Food Types

#	Column	Type
1	ID	BIGINT(40)
2	Type	TEXT

iv. Order

#	Column	Type
1	ID	BIGINT(40)
2	Restaurant ID	BIGINT(40)
3	Customer Name	TEXT
4	Driver Name	TEXT
5	Date	DATE
6	Time	TIME
7	Status	TEXT
8	Total	TEXT
9	Destination Address	TEXT

Media Storage

- We will be utilizing file storage for our various media files for the following reasons:
 - Storing large amounts of data will slow down our database, especially because our system isn't dedicated to hosting a database

Search/Filter Architecture and Implementation

- Pull down menu (categories) will be different cuisines
 - One of the tables in our database will be a cuisine specific table with a foreign key linking it to our table for each restaurant.
- We will also implement restaurant distance from 1600 Holloway Ave. (SFSU address) and price ranges (implemented as numerical values in the appropriate table)
- Search implementation will be done using SQL %like%.

API

- We will not be implementing our own API. We will use the ones provided by the tools and frameworks we use.

Algorithm Discussion

- Rating: will simply be done through reviews, which requires a 1 to 5 rating and we will simply take the average
- Ranking: search ranking will be implemented using a combination of filters and search term by the user

Changes to SW Stack

- No changes to report

6. Identify *Actual* Key Risks For Project At This Time

Skill Risks

- Some team members are still learning and expanding coding skills in Python, SQL and HTML/CSS as well as skills in utilizing certain tools such as Flask, Bootstrap and mySQL.
 - To resolve them, tutorial videos are being used as well as help from other team members who have more experience.

Schedule Risks

- Team 02 will be able to make each deadline given what each team member has committed and the resources given.
- A problem would be the leniency on deadlines before the actual deadline for the Milestone is due which causes procrastination.
 - The team lead will work on being more strict about deadlines.
- Team members have busy and varying schedules, it is hard to get a meeting outside class time with us all together.
 - To resolve this, we will have smaller group meetings with certain team members and then another one reviewing what was talked about in the previous meeting with the members who could not make it.
- Certain team members sometimes have power outages and will not be able to work together with other team members or may miss meetings and be behind.
 - Notes will be taken and sometimes recordings and once the power is back on the team member will be caught up in a separate meeting.

Technical Risks

- One technical issue right now includes being unable to manage the sessions and amount of users on the site.
 - We will do research on this.
- Changes added to development and software stack might cause other team members to be confused and not follow the right protocols on how to handle the tools.
 - Constant communication is required to update team members and make sure we are all up to date and understand what we are doing.

Teamwork Risks

- Some team members may not communicate problems or questions to certain team members which will cause miscommunication and no team work.
 - It is important to communicate to all members of the team involved in a specific task and let them know of all updates and plans.
- Some team members do not respond in a timely manner.
 - It is important to communicate and make updates and respond to let the team know where you are in the project and when you will be able to work on it.

Legal/Content Risks

- Currently, we might have some copyright risks with images we will use for the restaurant's foods.
 - We will figure out a way to overcome the copyright risks or use our own images
- Restaurant addresses might be a legal risk.
 - We will have to pick addresses we are allowed to use.

7. Project Management

For this project, one front end and back end member was assigned to work on the Milestone 2 documents. Each member of the team helped with the UI/UX mockups since there are a lot of pages. Then both front end lead and back end lead got placed on starting the vertical prototype after they were done with their mockups. GitHub master was placed with the vertical prototype team since he will be in charge of looking over the deployment server and organizing the project on GitHub. He is also responsible for testing the project at the very end before we turn it in. By dividing it this way there is one back end member and front end member for each of the tasks that way we ensure that the vertical prototype is consistent with the milestone 2 document.

Our project and tasks are being managed on Trello. This way each member is able to see what tasks need to be done, in progress and completed. If any of them have confusion about what tasks they are on, it will be assigned on Trello.