

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	22 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. Because the web application service is only dedicated to SFSU customers, the drivers do not have to worry about tending to other customers other than those related to the school. This is critical because students, staff, and faculty are so preoccupied with their work that they can get their food faster 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. SFSU 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:** Delivery address choice for registered user
 - 1.6. **Address_2:** Delivery address choice for registered user
 - 1.7. **Address_3:** Delivery 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
7. **Restaurant ID:** Restaurant the driver will be delivering for

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 Item**

1. **ID:** ID of restaurant menu item
2. **Restaurant ID:** ID of restaurant the menu item 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 Account:** Driver account that restaurants can give to multiple drivers
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 be required to review and approve restaurant registration
2. Administrators shall have the ability to remove users or inappropriate content
3. Application shall provide registered and unregistered users the map and the locations of the nearest establishments

ii. *SFSU Customers*

4. SFSU Customers shall have the ability to search food through different categories such as cuisines and restaurants
5. SFSU Customers shall have the ability to register and log in
6. SFSU Customers shall have the ability to choose food from the menu of specific restaurant
7. SFSU Customers shall have the ability to specify the location of delivery in SFSU campus
8. SFSU Customers shall have the ability to choose delivery or pick up
9. SFSU Customers shall receive notifications on the update of their order
10. SFSU Customers 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
11. SFSU Customers shall be able to reset their password if they forgot it
12. Unregistered users shall be required to register before placing an order

iii. *Restaurant Owner*

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

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

iv. *Delivery Driver*

15. Drivers will be required to register their information for a specific restaurant before becoming a driver

16. Drivers shall be able to access order to deliver

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

b. Priority 2

i. *SFSU Customers*

18. SFSU Customers shall have the ability to add desired menu items to checkout and later on be able to place their orders

ii. *Restaurant Owner*

19. 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

iii. *Delivery Driver*

20. 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*

21. Administrators shall provide registered users a way to communicate with the driver regarding the status of their order

22. Administrators shall make the application display trends of favorite restaurants and recent/common orders on the application

23. Administrators shall provide recommended restaurants that have reviews higher reviews and similar food types to registered and unregistered users

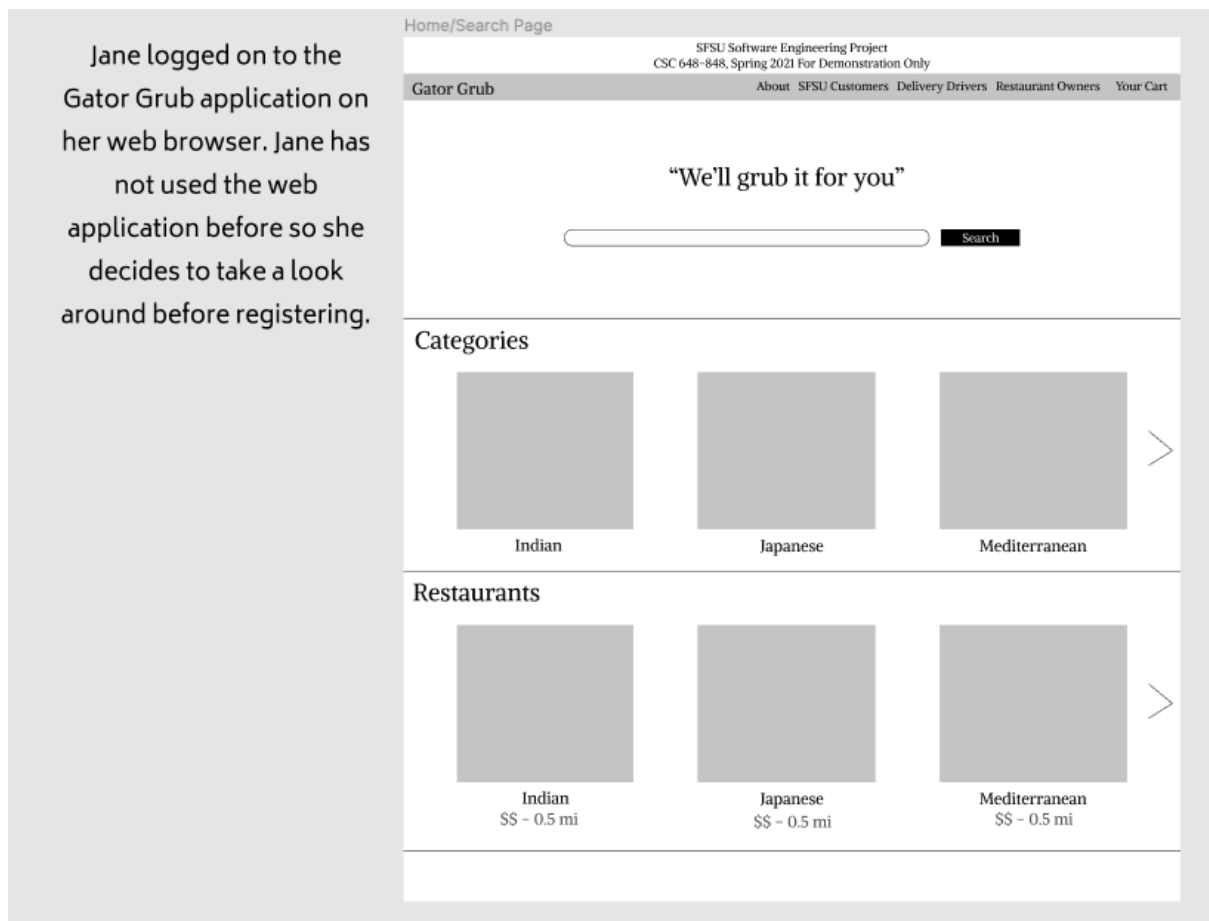
ii. *SFSU Customers*

24. SFSU Customers shall have a way to save past orders for a quick and easy order in the future

25. SFSU Customers shall be able to look at past orders to review order details such as food order, total price, tip, etc.
26. SFSU Customers shall have the ability to leave reviews on the performance of the transaction

4. Storyboards

Storyboard 1: Ordering Food:



Results Page

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator GrubAbout SFSU Customers Delivery Drivers Restaurant Owners Your Cart

"We'll grub it for you"

AsianSearch

Results6 out of 10 Results

Indian
\$\$ - 0.5 mi

Japanese
\$\$ - 0.5 mi

Chinese
\$\$ - 0.5 mi

Japanese
\$\$ - 0.5 mi

Korean
\$\$ - 0.5 mi

Vietnamese
\$\$ - 0.5 mi

Jane typed in 'Asian' in the search bar because she was craving for Asian foods. The results pop up below in a grid layout. It showed all the different types of Asian restaurants, the price level, and the distance from campus.

Jane keeps searching and eventually lands on Organic Greens restaurant page. From there she can pick if she wants the food delivered or picked up by her. From this page she picks what she wants to add to her cart and once she is finished, Jane clicks to view her cart by clicking 'Your Cart' on the top right corner of the web page.

SFSU Customer Restaurant Page/Menu

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator Grub

About SFSU Customers Delivery Drivers Restaurant Owners Your Cart

Asian

Search

Restaurant Image

Organic Greens

Salads | \$\$\$ | 1.3 mi

Pick Up

Delivery

Location:

3251 20th Ave, San Francisco
94132, CA

Map

Specials:



Waldorf Salad
\$12.39



Couscous Salad
\$15.77



Leafy Leaf Salad
\$20.01



Menu:

Drinks



Coke

small

\$13.47

Add to cart +

Appetizers



View Cart

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator Grub

AboutSFSU CustomersDelivery DriversRestaurant OwnersYour Cart

Asian

Search

Your Cart

Your Order

Add Items

1. Fresh Georgia Pecan (Organic Greens)

\$14.99

2. Western Omelet

1/2 Order Hash Browns
Coconut (\$1.50)
Please substitute bacon instead
of ham

\$18.49

Address: 123 Street, San Francisco, CA

EDIT

Add a Note (extra napkins, extra sauce...)

Add promo code

Tip your courier now?

Not now

\$2

\$4

\$6

Other

Subtotal

\$33.48

Tax

\$3.21

Place Order

\$41.68

Jane is directed to her cart and sees the items she picked, the total, and notes that she can add. Jane edits her address and then places her order.

In order to continue with her order, Jane must register and is directed to the login/registration page (lazy registration).

SFSU customer Login/Registration

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator Grub

AboutSFSU CustomersDelivery DriversRestaurant Owners

SFSU Customers

Welcome Back!

Username

Password

Forgot Password

Log In

New Customer?

Enter Full Name

Enter SFSU Email

Password

Confirm Password

Register

Storyboard 2: Delivering Food:

Jose visits the Gator Grubs web application page. He wants to apply to be a new driver so he clicks the 'Delivery Drivers' tab on the navigation bar.


Home/Search Page

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only


Gator Grub About SFSU Customers Delivery Drivers Restaurant Owners Your Cart

"We'll grub it for you"


Categories



Indian




Japanese




Mediterranean


Restaurants



Indian
\$\$ - 0.5 mi



Japanese
\$\$ - 0.5 mi



Mediterranean
\$\$ - 0.5 mi

Delivery Driver Login/Registration

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator Grub About SFSU Customers Delivery Drivers Restaurant Owners

Delivery Drivers

Welcome Back!

[Forgot Password](#)

New Driver?

Jose is then directed to the login/registration page for delivery drivers. Since he is new he fills out the 'New Driver?' column, picks a restaurant and registers.

Once Jose registers and is approved by the restaurants, he can edit his schedule.

Schedule

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator Grub [About](#) [Account](#) [Log Out](#)

[Orders](#)
[Schedule](#)

Schedule

Monday	Available	Unavailable	9:00AM	to	4:00PM
Tuesday	Available	Unavailable	9:00AM	to	4:00PM
Wednesday	Available	Unavailable	9:00AM	to	4:00PM
Thursday	Available	Unavailable	9:00AM	to	4:00PM
Friday	Available	Unavailable	9:00AM	to	4:00PM
Saturday	Available	Unavailable	9:00AM	to	4:00PM
Sunday	Available	Unavailable	9:00AM	to	4:00PM

Orders

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator Grub [About](#) [Account](#) [Log Out](#)

[Orders](#)
[Schedule](#)

Orders 3/19/2021

Restaurant: Organic Greens		
Order#	Customer:	Location:
1234567	Kehlani	Somewhere on SFSU Campus
Customer: Taylor Swift		
Delivery Address: Somewhere on Campus		
<div>MAP</div>		
Coke		\$55.55
Fries		\$7.43
		Total: \$62.98
1234567	Doja Cat	Somewhere on SFSU Campus

When Jose clicks on the Orders tab, he will be able to see all the restaurant orders details he needs to deliver

Storyboard 3: Registering A Restaurant:

Steve wants to register his restaurant to Gator Grub. He goes to the Gator Grub web application and is directed to the home page. He clicks on the tab for 'Restaurant owners'.




Home/Search Page

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator Grub About SFSU Customers Delivery Drivers Restaurant Owners Your Cart




"We'll grub it for you"

Categories



Indian Japanese Mediterranean

Restaurants



Indian Japanese Mediterranean
\$\$ - 0.5 mi \$\$ - 0.5 mi \$\$ - 0.5 mi

Restaurant Owner Login/Registration

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator Grub About SFSU Customers Delivery Drivers Restaurant Owners

Restaurant Owners

Welcome Back!

[Forgot Password](#)

Add Your Restaurant!

Steve is directed to the Restaurant owner login/registration page. He enters his information on the right side and clicks register.

Steve is then directed to the restaurant information page where he can edit the restaurant name, address, contact, hours, and even menu items. He is also notified that the posting of her restaurant and the information has to be approved by admin.

Restaurant edit page

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator Grub [About](#) [Account](#) [Log Out](#)

Restaurant Information
Menu
Orders
Order History

! Pending approval by admin

Restaurant Information

Restaurant Name: Ned's Noodles

Address:

Street: 3251 20th Ave
City: San Francisco
Zip Code: 94132
State: CA

Contact:

Email: NedNoodle321@noodlemail.com
Restaurant Number: (415)-123-4567

Hours of Operation: Everyday
10am - 10pm

Restaurant Menu edit page

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator Grub [About](#) [Account](#) [Log Out](#)

Restaurant Information
Menu
Orders

! Pending approval by admin

Menu

Add Category +

Drinks	Add Item + ▼
Coke	small \$13.47
Appetizers	Add Item + ►

When Steve clicks on the Menu tab he sees the items on his menu and can choose to edit them.

If Steve clicks on the orders tab and is then able to see the orders that customers place.

Orders List Page

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator Grub [About](#) [Account](#) [Log Out](#)

Restaurant Information	Orders
Menu	
Orders	

Orders 3/19/2021

Order #	Status	
1234567	Pending	View Delete
7654321	Completed	View Delete

Order Review

SFSU Software Engineering Project
CSC 648-848, Spring 2021 For Demonstration Only

Gator Grub [About](#) [Account](#) [Log Out](#)

Restaurant Information	#1234567
Menu	
Orders	

Customer: Taylor Swift
Driver: Michael Watt
Order Type: Delivery
Delivery Address: Somewhere on Campus
Status: Completed

Coke	\$55.55
Fries	\$7.43
Total: \$62.98	

When Steve clicks 'View' in the previous page, he is then directed to the order details.

5. High Level Architecture, Database Organization Summary Only

Database Organization

a. Users

i. SFSU Customers

#	Column	Type
1	ID	BIGINT(40)
2	Full Name	VARCHAR(45)
3	Email	VARCHAR(45)
4	Phone Number	VARCHAR(45)
5	Address_1	VARCHAR(45)
6	Address_2	VARCHAR(45)
7	Address_3	VARCHAR(45)
8	Username	VARCHAR(45)
9	Password	VARCHAR(45)

ii. Delivery Driver

#	Column	Type
1	ID	BIGINT(40)
2	Restaurant ID	BIGINT(40)
3	Full Name	VARCHAR(45)
4	Email	VARCHAR(45)
5	Phone Number	VARCHAR(45)
6	Username	VARCHAR(45)
7	Password	VARCHAR(45)

iii. Restaurant Owner

#	Column	Type
1	ID	BIGINT(40)
2	Full Name	VARCHAR(45)
3	Email	VARCHAR(45)
4	Phone Number	VARCHAR(45)
5	Username	VARCHAR(45)
6	Password	VARCHAR(45)
7	Restaurant ID	BIGINT(40)

b. Entity

i. Restaurant

#	Column	Type
1	ID	BIGINT(40)
2	Name	VARCHAR(45)
3	Address	VARCHAR(45)
4	Latitude	BIGINT(40)
5	Longitude	BIGINT(40)
6	Phone Number	VARCHAR(45)
7	Food Type	VARCHAR(45)
8	Price Level	VARCHAR(45)
9	Status	VARCHAR(45)
10	Restaurant Logo	LOB

ii. Restaurant Menu Item

#	Column	Type
1	ID	BIGINT(40)
2	Restaurant ID	BIGINT(40)
3	Food Item Name	VARCHAR(45)
4	Description Of Food	VARCHAR(45)
5	Image	LOB
6	Price	VARCHAR(45)

iii. Food Types

#	Column	Type
1	ID	BIGINT(40)
2	Type	VARCHAR(45)

iv. Order

#	Column	Type
1	ID	BIGINT(40)
2	Restaurant ID	BIGINT(40)
3	Driver Account ID	BIGINT(40)
4	Customer Name	VARCHAR(45)
5	Driver Name	VARCHAR(45)
6	Date	DATE
7	Time	TIME
8	Status	VARCHAR(45)
9	Total	VARCHAR(45)
10	Destination Address	VARCHAR(45)

Media Storage

- We will be utilizing BLOBS (longblobs). We will have fields for both large and small images.

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

Changes to SW Stack

- We have added the use of Bootstrap

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.