SW Engineering CSC 648
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Team 06
Milestone 01

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Executive Summary

There is a lot of money to be made in food delivery services here at SFSU! Currently, if a student wants food delivered to him or her, that person would order, pay exorbitant prices, and have to meet at agreed upon locations to pick up the food. It's not even a true delivery service! It's more of like a "meet me halfway" sort of deal, where they're paying to bring the food just a little bit closer! I want your help in fixing these issues to make our community better and make a hell of a lot of money doing so. I want to make an app that combines our specific knowledge of the campus with food services to provide students, faculty and staff with an even better delivery experience coupled with discounted prices and deliveries that actually make it to your door! If you provide the fundings, I'll provide the team to tackle the logistics and make this dream a reality.

Persona and Main Use Cases

Name: Rick
Age: 23
Work: SFSU Student

Skills/ Attitude:

- Confident using website application

Limitations:

- Independent from parents
- Busy for school and work

- Limited economy

Goals:

- He wants to have a great deal for lunch that will not cost too much
- Give something enough for him to get full.

Use Case:

Deadline is coming up so he decided to save time by ordering lunch instead of making it. Opens up the app on his phone and searches for the food type he wants to eat and selects the discount tab. Selects the food he wants and confirms order. Right before checkout he is asked to login before proceeding, logs in and completes the order. A few minutes later food arrives at his dorm.

Name: Mary
Age: 56
Work: SFSU faculty

Skills/ Attitude:

- Confident using website application
- Economy freedom

Limitations:

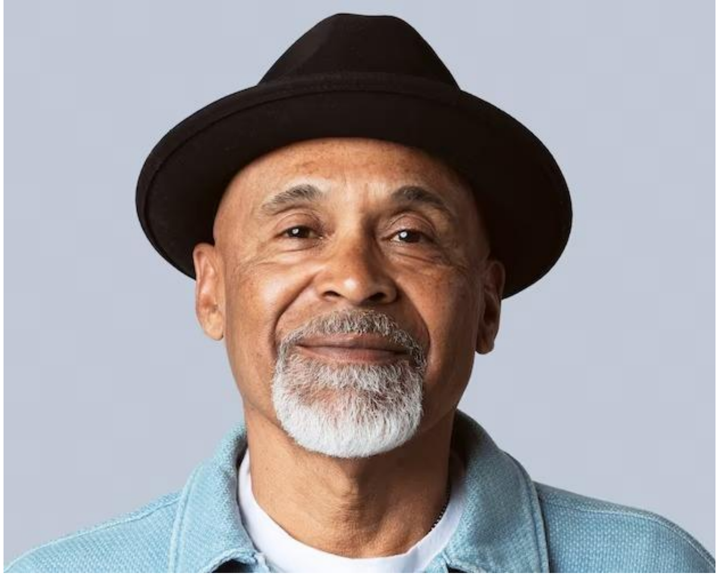
- Busy between classes
- Don’t have much time during break

Goals:

- She doesn't have enough time to go outside of campus to get a meal.
- She wants to order online and have someone deliver to the building on time.

Use Case:

Needs to get some food between classes but is too busy to leave campus to go get it. Opens up her laptop and navigates to our site. Selects the order she wants from the map and orders what she wants. Uses site often and is already logged in on her laptop taking her straight to checkout. A few minutes later food arrives in her class room.



Name: Petter
Age: 54
Work: SFSU staff

Skills/ Attitude:

- Economy freedom

Limitations:

- Poor eyesight
- Low learning curve

Goals:

- He wants to order a meal online with an application that is easy to use.
- Don't have to learn anything new to use the application.
- Wants tacos

Use Case:

Needs to get some food during lunch break. Takes out the phone and uses our website navigating to our home page map and wants tacos specifically so he uses our search bar to find them. Finds tacos from multiple restaurants and decides to go for the tacos from the highest rated option. Goes to check out asking him to register before proceeding, registers logging him in immediately and completes the order. A few minutes later food arrives at his office.

Name: William
Age: 32
Work: Restaurant manager

Skills/ Attitude:

- Skills for using internet
- Catering newcomer

Limitations:

- New to the industry
- Only few orders per day

Goals:

- He is looking for catering business partners
- Want take more order
- Want a way to promote his restaurant and get more customer

Use Case:

Needs to sell some food and promote his restaurant and discovers our website in the process. He notices the registration button in our nav bar and navigates to our restaurant registration form. Fills out form and is asked to register as a restaurant manager so he does so. After he submits this form and is told to wait for approval. The next day he is ready to accept requests for food and learns about these requests using a request portal similar to one for drivers.

Name: Olivia
Age: 35
Work: Admin

Skills/ Attitude:

- Skillful to use website application
- Skillful to use database

Limitations:

- Lacks experience working with others
- Using an old computer

Goals:

- She want to have a clear interface for the apply pending page for the application

Use Case:

Works for us. Approves requests to create accounts, Restaurant applications and keeps an eye on the home page and filed complaints using a slightly modified version of our website with access to admin controls. UI is bare bones but that makes it clear and easy for her to understand, mitigating any issues she may have had with her old pc and social skills.

Name: Jane
Age: 27
Work: Driver

Skills/ Attitude:

- Upbeat
- Good communicator
- Good at calculating things in her head

Limitations:

- Don’t know the detail of the delivery address
- Don’t have the map for the campus
- Focus on the road and not be distracted on the phone

Goals:

- The destination is clear and have a map for campus so she can delivery order on time
- Interface is clear and big enough
- Application is easy to use
- Needs some cash

Use Case:

Opens up the app and logs into her Driver account. Notices a few orders she is close to using the map and the pick up/drop off instructions. Uses included google map to navigate the restaurant and then the in-app campus map to get to the drop off location. After the food is delivered she gets her pay and the cycle repeats until she has the money she needs.

Data Glossary and Description

User Types

- Unregistered user: can browse restaurants and their menus and search for restaurants by name and category. Does not need to register or log in.
- Customer: SFSU students, faculty, and staff. Has all the privileges granted to unregistered users, but can also place orders. Needs to register and log in.
- Restaurant manager: the person who submits their restaurant's registration and manages their menu and orders. Needs to register and log in.
- Driver: the person who delivers orders to customers. Can accept or decline a delivery assignment. Needs to register and log in.
- Admin: created directly within the database. Can approve or reject a restaurant's registration. Needs to log in.

Data Entities

- Restaurant: a business that registers for our service to provide their food to customers. A restaurant contains the following subcomponents:
  - name
  - address
  - phone number
  - email
  - category
  - logo
  - rating
  - longitude
  - latitude
  - minimum delivery time
  - registration status
- Category: the type of food that a restaurant serves. A category contains a name that represents a type of cuisine, e.g. Mexican, Chinese.
- Dish: a particular item of prepared food served at a restaurant. A dish contains the following subcomponents:
  - name
  - price
  - description
  - picture
  - information that identifies the restaurant at which the dish is served
- Order: a request from a customer for some dishes at a restaurant. An order contains the following subcomponents:

  - order date and time
  - order total
  - delivery fee
  - information that identifies driver assigned
  - information that identifies the customer who places the order
  - information that identifies the restaurant fulfilling the order
  - customer address
  - order status
- Order dish: a particular dish on a single order. An order dish contains the following subcomponents:
  - information that identifies the dish
  - information that identifies the order to which the dish belongs
  - quantity
- Address: the location of a restaurant or a delivery point of a customer. An address contains the following subcomponents:
  - zip code
  - unit number
  - street number
  - city
- Customer address: a particular delivery point of a customer. A customer address contains the following subcomponents:
  - information that identifies the address
  - information that identifies the customer to whom the address belongs

Functional Requirements

Functions

Unregistered users

- Unregistered users shall be displayed a map of the surrounding restaurants of the SFSU campus
- Unregistered users shall be displayed a list of restaurants and the restaurant’s information
- Unregistered users shall search for their desired restaurants by entering text into a search bar
- Unregistered users shall be given the option to only view restaurants of specific categories
- Unregistered users shall be displayed a menu upon clicking a restaurant’s entry
- Unregistered users shall add dishes to a shopping cart

- Unregistered users shall be requested to sign up or sign in as a customer upon checking out their shopping cart
- Unregistered users shall sign up by filling in a registration form after clicking a signup button in a portal

Registered users

- Registered users shall log out upon clicking a logout button
- Registered users shall log in by their email and password after clicking a login button in their respective portal
- Registered users shall delete their account upon clicking a delete account button

Customer (Customers have all the functions of unregistered users and registered users)

- Customers shall enter the address they want their order to be delivered to
- Customers shall order their requested food after checking out their shopping cart
- Customers shall be given an option to rate restaurants they have ordered from
- Customers shall be given discounts on their orders at the discretion of restaurants
- Customers shall be given the option to favorite restaurants

Drivers (Drivers have all the functions of registered users)

- Drivers shall be displayed a list displaying orders they must deliver
- Drivers shall see specific information about an order
- Drivers shall be displayed a map showing pick up and drop off locations for their deliveries

Restaurants (Restaurants have all the functions of registered users)

- Restaurants shall be told to wait for approval upon registration
- Restaurants shall add new dishes to their menu after approval from an admin
- Restaurants shall change information about dishes after approval from an admin
- Restaurants shall delete their dishes at will
- Restaurants shall offer discounts of their menu items at their own discretion

Admins (Admins have all the functions of registered users)

- Admins shall have access to data of all users
- Admins shall approve or deny applications of restaurants
- Admins shall approve or deny changes to a restaurant's menu

Data descriptions

User: Any person that uses our website

Unregistered user: A user that has not logged in. They have access to view a restaurant's menu, name, rating, and logo. They can add a restaurant's dish to a shopping cart, but they cannot make the order until they create or login to an account

Registered user: A user that has an account on our website. The types of accounts can be customers, drivers, restaurants, or admins

Registration form: A form an unregistered user must fill in to create an account. A full name, email, phone number, and password is required for all types of accounts and more information is needed depending on the type of account. The information is sent to be stored in a database for each user

Portal: A page that allows an unregistered user to login or sign up as a specific account. Customers, drivers, and restaurants have their own portal and admins will login in from the customer's portal

Customer: Are the students, staff, and faculty of San Francisco State University that order food from restaurants registered within the website. They have the access of an unregistered user except they can also specify an address the food is delivered to, rate a restaurant, and view information about an order they have made. They specify their role at SFSU at registration along with the rest of the basic information

Driver: Are the workers that deliver orders that customers make. They have access to the orders of customers to make deliveries. They must include their driver's license and insurance while registering and their latitude and longitude are also stored to estimate the time to make deliveries

Restaurant: Are the businesses that provide food for the customers. They have access to their own information and may also modify their menu. Admins must approve any new changes they make to their menu except when they delete a dish. The name of the restaurant, logo, and address must be entered while registering

Admin: Are the people that are responsible for running the website. They have access to see all information of users and can approve or deny restaurant applications and changes restaurants make to their menu. The accounts are not made through registration and can only be initialized directly in the database. The full name, email, and password is stored in the database

Map: A map that displays the SFSU campus and restaurants nearby that are signed up on our website. It will be use the Google maps api

Address: A location that is specified through a street, city, and zip code

Searchbar: A text bar an unregistered user or customer types into and the website returns restaurants whose name is similar to the input. A category can be specified to choose restaurants with a specific type of food

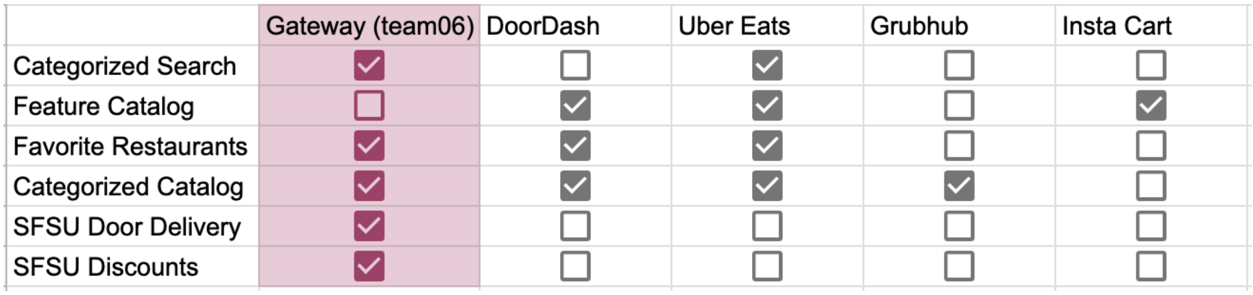
Menu: All of the dishes that are available from a restaurant

Dish: A singular food item that a restaurant is selling. It will have a name, picture, description, and price shown in a page of a restaurant

Shopping cart: A list of dishes that an unregistered user or a customer adds to. It will display the total cost of the items in the cart and it can be checked out at any time to make an order

Order: A request for the food a customer has paid for. Customers can see their order and it shows the fees incurred from the order, the order's date and time, and the status of the delivery

Competition



	Gateway (team06)	DoorDash	Uber Eats	Grubhub	Insta Cart
Categorized Search	☑	☐	☑	☐	☐
Feature Catalog	☐	☑	☑	☐	☑
Favorite Restaurants	☑	☑	☑	☐	☐
Categorized Catalog	☑	☑	☑	☑	☐
SFSU Door Delivery	☑	☐	☐	☐	☐
SFSU Discounts	☑	☐	☐	☐	☐

- Categorized Search: This feature allows users to search specific fields or niches. For example, when the italian food is selected, the search bar will return italian restaurants that fit the search field.
- Featured Catalog: Shows featured restaurants as opposed to a random catalog of restaurants. Since our app won't have enough data to display "hot items" or "commonly ordered places" we can't implement this feature.
- Favorite Restaurants: Allows users to distinguish restaurants they favored to find in a separate location for ease of access.
- Categorized Catalog: When selecting a category icon, the catalog adjusts to display restaurants that are in said category.
- SFSU Door Delivery: Delivers right to your door! No more meetup spots!
- SFSU Discounts: Special discounts for SFSU users!

High Level System Architecture

SW Components:

- Database: SQL
- React (front end framework)
- Next.js
- Bootstrap

Server

- AWS Amplify

External API's

- Google Maps API

Search functionality

- As suggested in class slides.

Team and Roles

- Team Lead (Justin Shin) Justin is responsible for management, communication and task delegation.
- Github Lead (Ryan Scott) is the bridge between the front and back end. He is responsible for overlooking the overall flow of the app and helps with merging code between branches as well as between the front and back end.
- Front End Lead (Alex Griffin) Alex is responsible for how the app looks. He will primarily be working on CSS and making things look good.
- Front End Support (Konnor Nishimura) Konnor is responsible for the front end functionality. Konnor will work together with the back end to make sure that the app flows properly and that functionality is in order.
- Back End Lead (Jack Lee) Jack is responsible for the server routing and communication with the front end and the database.
- Back End Support (Xiao Deng) Xiao is responsible for everything related to the database. He will help create portals to access the database as well as ensuring proper data manipulation.

Checklist

- So far all team members are engages and attending team sessions when required ✅
- Team found a time slot to meet outside of class ✅
- Back end, Front end leads and github master chosen ✅
- Team ready and able to use the chosen back and front end frameworks and those who need to learn are working on learning and practicing ✅
- Team lead ensured that all team members read the final M1 and agree/understand it before submission ✅
- Github organized and discussed in class ✅
- Use of any GenAI. Did not use AI. ❌