SW Engineering CSC648 Spring 2021

Gator Grub - Team02

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Milestone 1

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History Table	
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1. **Executive Summary:**

The motivation behind Gator Grub is to help students and faculty order food using a delivery/pick up service dedicated to the SFSU Campus. We wanted to create a service that is safer and more convenient not just for the student and faculty at campus, but for the drivers as well. This is important because the students and faculty are so busy with work they need something more convenient without having to worry about their safety. We also wanted to give local restaurants an opportunity to expand their business.

In order to make the students and faculty of San Francisco State University safer, the drivers hired will be working students from SFSU. 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. The student drivers will also have a more convenient and flexible job for their school schedule. A variety of restaurants will also be able to register and provide the students with diverse food choices which will help restaurants expand 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 teams performance.

2. **Personae and Main Use Cases:**

    a. Personae

Jane:	About Jane: • Jane is a 21 year old undergraduate senior at SFSU • Has lots of projects • Indecisive • Stays at school late at night studying Goals and Scenario: • At SFSU Library at 8pm studying. • Doesn't want to leave her spot and take a break to get food. • Jane wants other snacks and supplies from the convenience store.

Tom:	About Tom: • Tom is an SFSU department head. • Very picky. • Loves cooking Goals and Scenario: • Tom has many appointments with students. • Tom has no time in between appointments to grab lunch.

Joe: 	About Joe: • Joe is an SFSU student • Joe has a hectic schedule and can't find a job that will support his schedule. Goals and Scenario: • Joe needs money and a job. • It is hard for Joe to find a job due to his inflexible class schedule. • Joe needs to find a job where he can manage his own schedule.

Steve: 	About Steve: • Steve is a business owner in San Francisco. Goals and Scenario: • Wants to acquire more recognition through more customers.

b. Main Use Cases

Customer(student): Jane is in her last semester at SFSU. She is studying for her finals in the library. It is late at night. She is hungry and doesn't have time to leave and pick food up. She goes on Gator Grub and sees featured specials by various restaurants. Jane doesn't have to keep searching for a meal she wants and just picks from the displayed specials, saving her time. Jane is also in need of snacks and

also orders from a local convenience store provided by Gator Grub. The driver shows up with her order with no problem getting into the building and finding Jane's spot at the library.

Customer(faculty): It is 7am and Tom is in his office. He has a busy day ahead of him. Tom has no time to cook or go out to find a place to eat. Tom goes on Gator Grub and schedules his orders throughout the day. Tom has time to browse the application thoroughly and pick the meals he feels is the best. The meals come on time and all Tom has to worry about is being in his office and paying.

Driver(student): Joe is a full time student at SFSU and he is in need of a job to support himself while living on his own. Joe registers as a driver for Gator Grub and is able to set up his own working schedule. Joe picks up an order and delivers the order quickly because he is familiar with the campus. Joe makes it in time for his next class because he is already on campus.

Restaurant Owner: Steve is an owner of a Mediterranean Restaurant in the Sunset District of San Francisco. Steve wants his restaurant to be known to more customers. He makes specials to make customers happy and entice them to try out their foods but he needs help getting the word out. Steve registers his restaurant to Gator Grub and there he is prompted to list his menu items, hours of operation, etc. He is then able to list his specials and how long they are being offered for. More people order his special and start ordering more food from his restaurant.

3. **List of Main Data Items and Entities - Data Glossary/Description:**

    1. Main Terms:

a. Administrators: Monitor platform for optimal usage. These could include, but are not limited to actions that go against user agreement policies, ensuring appropriate user interactions and functionality, and ensuring the platform maintains optimal performance and functionality.
    i. “Actions that go against user agreement policies”: prior to setting up an account, either as a Customer, RestaurantGuest, or DeliveryPerson, all users will have to agree to a set of policies which ensure a positive experience for any and all registered users. The Administrators will monitor for users voiding the contract and breaking any policies that the platform sets forth.
    ii. “Appropriate user interactions and functionality”: The three primary interactions on our website will be between customers, restaurants, and delivery drivers. It is the Administors’ responsibility to ensure that each party works well cohesively and performs optimally on their own. For example, the restaurant preparing the food, should update the delivery driver or customer (depending on delivery or pickup) when the food will be ready. This estimate should be accurate within a standard deviation of five minutes. This way the customer or delivery driver is not made to wait when picking up food. Similarly, the delivery driver should be giving updates to the customer on when the food has been picked up and how long it will take to deliver the food to the desired location. The customer should provide specific details to the restaurant if their desired order deviates from the menu, and should communicate to the delivery driver how to get to the desired drop off location if it is difficult to get to. All of these interactions will be monitored by the administrators, so in case there are any issues, those issues can be resolved and/or the affected parties are reciprocated.

iii. “Platform maintains optimal performance and functionality”: This is probably the most straightforward administrative duty. It is simply ensuring that the platform performs up to a specific standard, technically speaking. An example of this could be slow performance due to a high number of users, or worse case scenario, a complete system failure due to the same reason. It is the administrators jobs to rectify this situation and maintain the platforms functionality and performance.

b. Customers: Only students, staff and faculty of SFSU can register an account as a customer. Shall be able to add and remove menu items to the shopping cart for review and purchase. Review and complete order by selecting delivery location. Track orders through updates given by restaurant and delivery drivers.

c. Restaurant: Registered restaurants shall offer delivery or pick up services to customers. Responsibilities also include updating drivers or customers on the time it will take to prepare the food, within a five minute standard deviation, so that pick up or delivery is as seamless and efficient as possible. Additionally, any verified issues with the order are the restaurant's responsibility.

d. Delivery Driver: Receive incoming delivery orders and update users on estimated time of arrival at the drop off point. Responsibilities also include communicating with the customer if the drop-off point is difficult to get to or if there are any issues getting to the drop-off point in a timely manner.

2. Types of Users:
    a. Administrators
        i. Has access and will monitor all services of application.
    b. Customers:
        i. Browse the website and search through restaurant pages, menus and reviews.
        ii. Create an account through the website.

iii. Create, complete and track orders.

c. Guests:
    i. Browse the website and search through restaurant pages, menus and reviews.

d. Delivery Driver:
    i. Has all the privileges of a customer, plus access to pickup and drop off locations.
    ii. All communication between restaurants, drivers, and customers will happen through the app so no phone numbers (personal details will be shared).

e. Restaurateur:
    i. Can create a restaurant account which allows them to post a menu, take orders, and similar communication metrics to the delivery driver

3. Entities:
    a. Restaurants:
        - This will include attributes such as the name of the restaurant and its location.
    b. Pickup
        - This will include attributes such as when the order is available for pickup and the order ID.
    c. Delivery
        - This will include attributes such as the address the order will be delivered to and the order ID.
    d. Menu
        - This will include attributes such as the name of the food item, the price, and the amount of calories it contains.

4. **Initial List of Functional Requirements:**

1. Users shall be able to search food through different categories such as cuisines and restaurants
2. Users shall be able to choose food from the menu of specific restaurant
3. Users shall be able to add desired food(s) to cart and later on, to be finish order (without payment)
4. Users shall be able to specify the location of delivery in SFSU campus
5. Users shall be able to look at past orders to review order details such as food order, total price, tip
6. Users shall have the ability to leave reviews on the performance of the transaction
7. Application shall provide a way to sort and filter food choices to make it easier for users to find food
8. Application shall provide user(s) to communicate with one another regarding the status of their order
9. Application shall provide user(s) the map and the locations of the nearest establishments
10. Application shall provide user(s) a way to save past orders for a quick and easy order in the future
11. Application shall provide user(s) notifications on the update of their order(s)
12. Required Registration form: registration will be required for users; full name, email address, default home address, phone number, occupation; Stored in database.
13. Transactions in the application shall be performed securely to prevent important private data leak
14. Privacy: Data of the user(s) shall not be shared with anyone else and only our website is allowed to use the data to provide the user(s) better experience.
15. Users representing restaurants will be able 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.

16. Users that are delivery drivers will be able to update estimated time of arrival to drop-off point. This can only vary by a standard deviation of five minutes
17. Users will be able to specify certain options through comments on an order (example: no onions on a burger). Restaurants will be held to their comments and these comments will be displayed as a part of the order, rather than something extra.
18. If users begin to show trends, things like favorite restaurants, or similar drop off points, these trends will be displayed through the platform.
19. The application will also recommend restaurants to customers which have reviews higher than four stars and are similar cuisines.
20. Customers will be able to communicate with drivers directly on the application, to help with finding a convenient drop-off location for both parties. An example of this could be specifying which entrance of the SFSU Science building the food shall be dropped off at.

5. **List of Non-Functional Requirements:**

1. Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in M0. Application delivery shall be from chosen cloud server.
2. Application shall be optimized for standard desktop/laptop browsers e.g must render correctly on the two latest versions of two major browsers.
3. All or selected application functions must render well on mobile devices (specifics to be developed in consultation with users e.g. Petkovic)
4. Ordering and delivery of food shall be allowed only for SFSU students, staff and faculty.
5. Data shall be stored in the database on the team's deployment cloud server.
6. No more than 50 concurrent users shall be accessing the application at any time.

7. Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users.
8. The language used shall be English (no localization needed).
9. Application shall be very easy to use and intuitive.
10. Application should follow established architecture patterns.
11. Application code and its repository shall be easy to inspect and maintain.
12. Google analytics shall be used.
13. No email clients shall be used.
14. Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated in the UI.
15. Site security: basic test practices shall be applied (as covered in the class) for main data items.
16. Application shall be media rich (images, maps, etc.). Media formats shall be standard as used in the market today.
17. Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development.
18. The application UI (WWW and mobile) shall prominently display the following exact text on all pages "*SFSU Software Engineering Project CSC 648-848, Spring 2021 For Demonstration Only*" at the top of the WWW page. (Important so as to not confuse this with a real application).

6. **Competitive Analysis:**

Below is the competitive analysis of several websites with our web application Gator Grub which is in bold and marked as the shaded column.

Features	DoorDash	GrubHub	Uber Eats	Postmates	**Gator Grub**
Payment method	++	++	++	+	**++**

Availability	+	++	++	++	**+**
Delivery Speed	+	+	++	++	**++**
Restaurants options	+	++	+	++	**+**
Ease of use	+	+	+	++	**++**
Search	+	+	+	+	**+**
Map	+	+	+	+	**++**
Cart	+	+	+	+	**++**

Feature exist -> +
Superior feature -> ++

Our website places a strong emphasis on convenience and prompt delivery. Since the website is mostly made for SFSU students it is not widely available and therefore the options of restaurants are limited.

7. **High-level System Architecture and Technologies Used:**

Server Host	AWS EC2 t2.micro 1vCPU 1 GiB RAM
Operating System	Ubuntu 20.10 Server
Database	MySQL v8.0
Web Server	Apache v2.4.46
Server-Side Language	Python v3.8
Additional technologies	Web Framework: Flask

	IDE: PyCharm

8. **Team and Roles:**

Patricia Sarno	Team Lead
Erik Chacon	GitHub Master
Affaan Ghazzali	Back End Lead
Danny Collan	Front End Lead
Edmund Manzano	Back End Team
Saloni Mahat	Front End Team

9. **Checklist:**

Item:	Status:
So far all team members are engaged and attending ZOOM sessions when required.	DONE/OK
Team found a time slot to meet outside of the class.	DONE/OK
Back end, Front end leads and Github master chosen.	DONE/OK
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.	ON TRACK
Team lead ensured that all team members read the final M1 and agree/understand it before submission.	DONE/OK
Github organized as discussed in class (e.g. master branch, development branch, folder for milestone documents,etc.)	DONE/OK