

SW Engineering CSC 648/848-05 Fall 2022

The Virtual Farmer's Market

Team 3

Milestone 2 10/21/2022

Name	Role
Seth Pavlicek spavlicek@sfsu.edu	Team Leader
Alexander Bjeldanes	Database
Armando Partida	Backend
Michael Abolencia	
Angel Antunez	Github Master
Igor Tsygankov	Frontend

History

Version	Date
Milestone 1 Version 1	9/22/2022
Milestone 1 Version 2	10/7/2022
Milestone 2 Version 1	10/21/2022

Index

1. Data Definitions	3-5
2. Prioritized Functional Requirements.....	6-11
3. UI Mockups and Storyboards.....	12-24
4. High level Database Architecture and Organization.....	25-27
5. High Level APIs and Main Algorithms.....	28-29
6. High Level UML Diagram.....	30
7. High Level Application Network and Deployment Diagrams.....	31
8. Key Risks.....	32
9. Project Management.....	33
10. List of Team Contributions.....	34-35

Data Definitions

General User:

- Name

Registered Vendor:

- Address
- Email
- Name
- Phone Number
- Items Currently Selling

Registered Customer:

- Address
- First Name
- Last Name
- Email
- Phone Number

Item:

- Vendor Source
- Meal
 - Name
 - Price
 - Ingredients
 - Nutrition
 - Allergens
 - Calories
 - Sugar
 - Carbohydrates

- Fat
- Protein
- Produce
 - Name
 - Price
- Packaged Food
 - Name
 - Price
 - Weight
 - Nutrition
 - Allergens
 - Calories
 - Sugar
 - Carbohydrates
 - Fat
 - Protein

Filters:

- Item Category
- Nutrition
 - Allergens
 - Calories
 - Sugar
 - Carbohydrates
 - Fat
 - Protein

Recurring Delivery:

- Address to deliver to
- Items to deliver
- Frequency

- Duration
 - Seasonal

Address:

- Street Number
- Street
- City
- County
- State
- Zip code

Prioritized Functional Requirements

Priority 1:

1. Registration:

1.1 A general user shall be able to enter their data and sign up for our services.

2. Registered Customer Account:

2.1 A general user shall be able to set up a registered customer account.

2.2 A registered customer shall only purchase items.

3. Registered Vendor Account:

3.1 A general user shall be able to set up a registered vendor account.

3.2 A registered vendor account shall only sell items.

4. Search:

4.1 A general user or registered customer shall be able to search for items.

4.2 A general user or registered customer shall be able to search for registered vendor accounts.

5. Filtering:

5.1 A general user or registered customer shall be able to use filters when searching to narrow down their selection of items.

7. Purchase:

7.1 A general user or a registered customer account shall be able to purchase items from registered vendor accounts.

9. Recurring Deliveries:

- 9.1 A registered customer account shall be able to create a recurring delivery in order to receive items at given time intervals.
- 9.2 A registered customer account shall be able to cancel their recurring delivery.

11. Contacting Vendors:

- 11.1 A general user or registered customer shall be able to access a registered vendor's contact information to ask about their items.

13. Nutrition Information:

- 13.1 A general user or a registered customer shall be able to view the nutrition information of an item.

15. Price Comparison:

- 15.1 A general user or a registered customer shall be able to compare the prices of the same item sold by different registered vendors.

16. Vendor Proximity:

- 16.1 A general user or a registered customer shall be able to search for registered vendors closest to a given address

17. Vendor Pricing:

- 17.1 A registered vendor shall be able to set the price for the items they are selling.

20. Alternatives:

- 20.1 A general user or a registered customer shall be able to pick a different registered vendor if their first choice ran out of stock.

23. Editing Customer Information:

- 23.1 A registered customer shall be able to edit their information.

24. Total Price:

24.1 A general user or a registered customer shall be able to see the total price of all the items in their shopping cart before finalizing the transaction.

26. Sort:

26.1 A general user or a registered customer shall be able to sort their search results based on given criteria.

27. Tracking ID:

27.1 A registered customer shall be given a tracking ID for their orders.

33. Cart:

33.1 A general user or a registered customer shall be able to see items they added to their cart.

33.2 A general user or a registered customer shall be able to add and remove items or change the quantity of an item in their cart.

35. Delivery/Pickup:

35.1 A general user or a registered customer shall be able to pick up or have their items delivered to them.

38. Item Description:

38.1 A general user or a registered customer shall be able to read a clear description of an item.

41. Login/Logout:

41.1 A general user shall be able to login and logout of their registered customer and registered vendor accounts.

42. Editing Vendor Information:

42.1 A registered vendor shall be able to edit their business contact information.

43. Selecting a Vendor:

43.1 A general user or a registered customer shall be able to select a registered vendor that they will solely buy items from.

Priority 2:

6. Reviews:

6.1 A registered customer shall be able to post reviews for an item.

10. Revising an Order:

10.1 A general user or a registered customer shall be able to change an order within a certain time frame.

14. Discounts:

14.1 A general user or a registered customer shall be able to view discounts for certain items.

14.2 A registered vendor shall be able to provide discounts for their items.

19. Previous Purchases:

19.1 A registered customer shall be able to view their purchase history.

21. Recommended Products:

21.1 A general user or a registered customer shall be recommended items that may interest them based on previous purchases.

22. Following a Vendor:

22.1 A general user or a registered customer shall be able to follow a registered vendor for updates about a vendor's items.

25. Discounting Bulk Purchases:

25.1 A general user or a registered customer shall receive a discount if the total price of items in their cart exceeds a certain amount.

31. Customer Service:

31.1 A general user or a registered customer shall be able to contact customer service if they have any issues.

37. Rewards:

37.1 A general user or a registered customer shall be able to see the rewards page.

37.2 A general user or a registered customer shall receive rewards points for every purchase.

Priority 3:

8. Returns:

8.1 A general user or a registered customer shall be able to return their purchased items within a certain time.

12. Newsletter:

12.1 A general user or a registered customer shall receive a newsletter notifying them about deals, new products, and popular vendors.

12.2 A general user or a registered customer shall opt-in to the newsletter and be able to opt-out at any time.

29. Careers:

29.1 A general user shall be able to apply for working positions at TVFM.

30. Social Media:

30.1 Anyone shall be able to see offers, features, discounts, events on the social media account of TVFM.

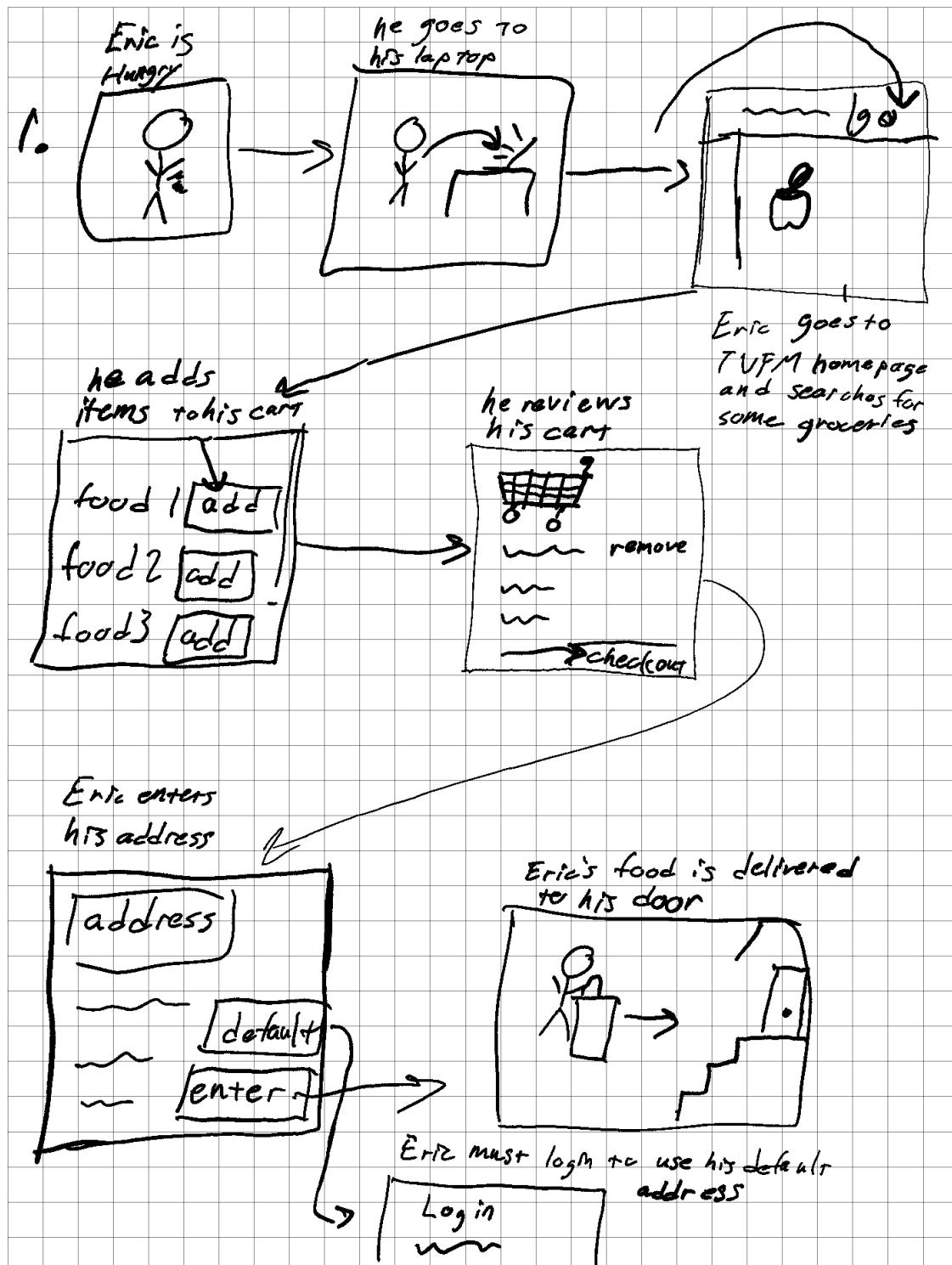
39. Advertisement:

39.1 A general user or a registered customer shall receive advertisements about items they may be interested in.

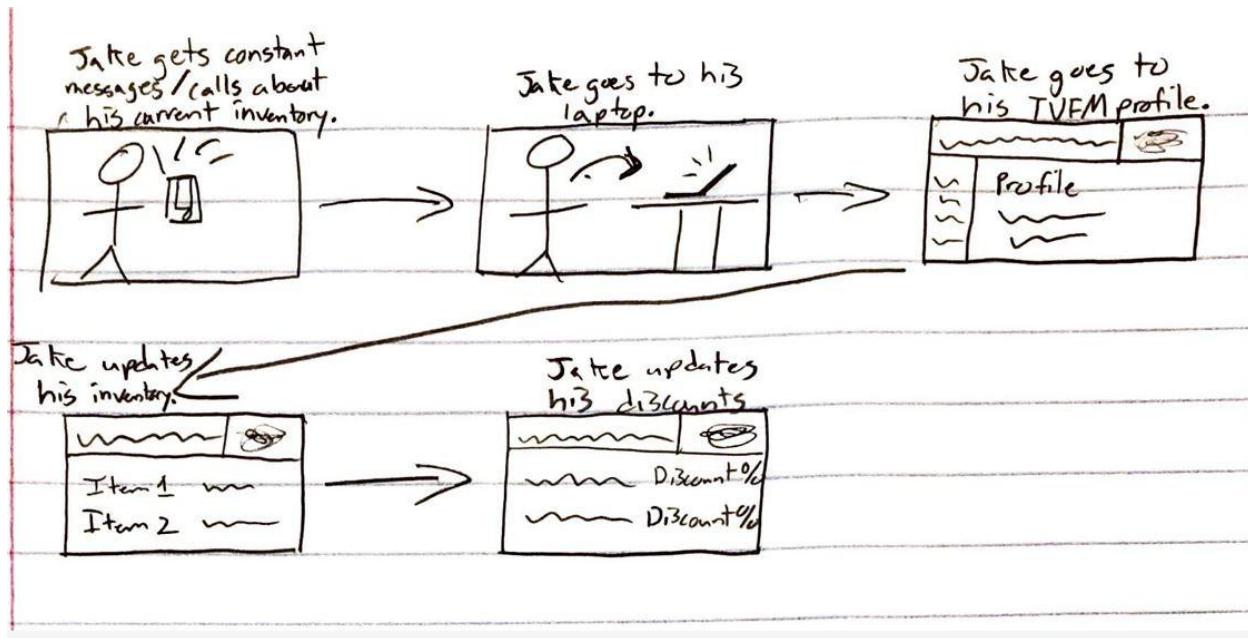
39.2 A registered vendor shall be able to pay to have an advertisement about their item shown to a general user or a registered customer.

UI Mockups and Storyboards

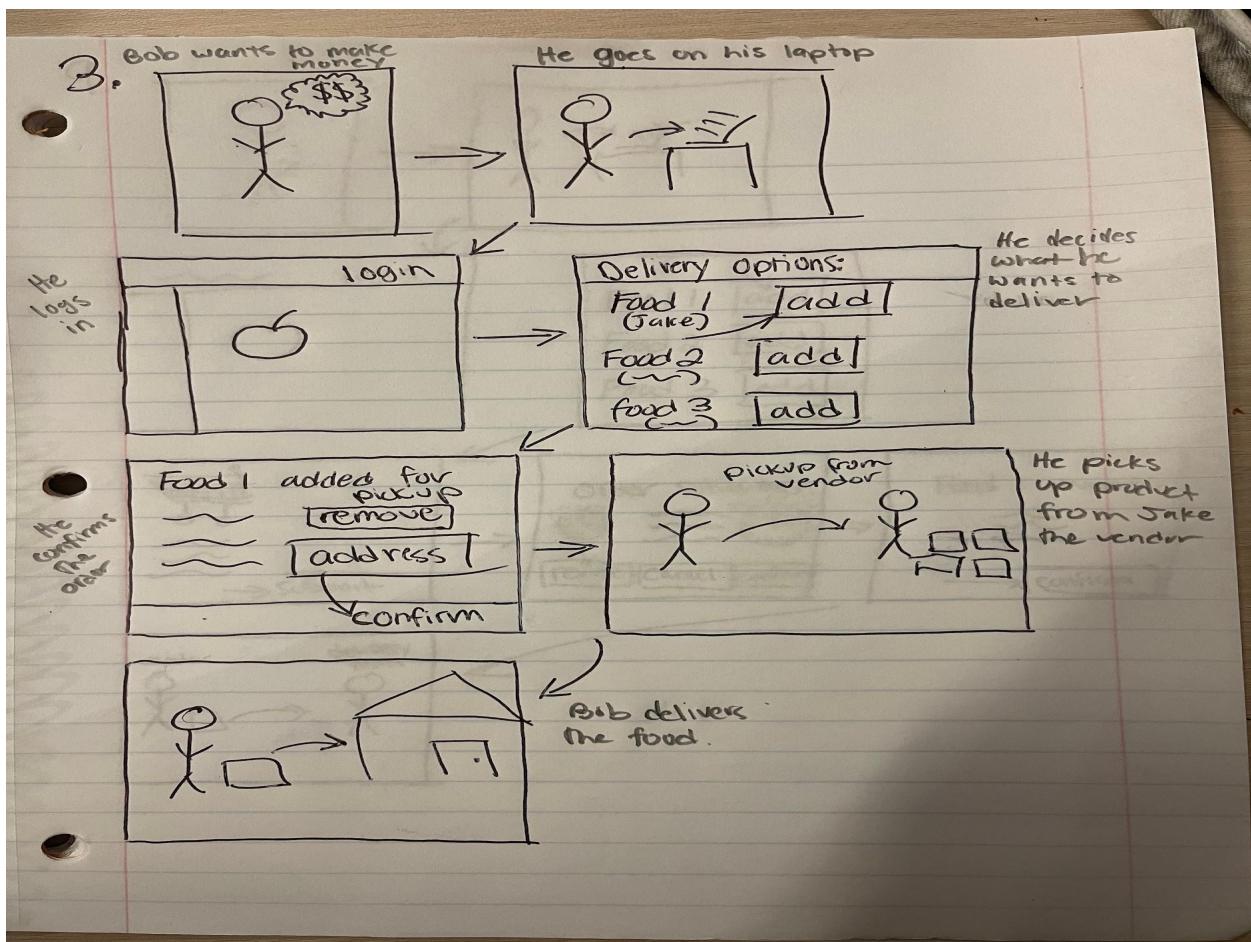
Use Case 1: Need Groceries



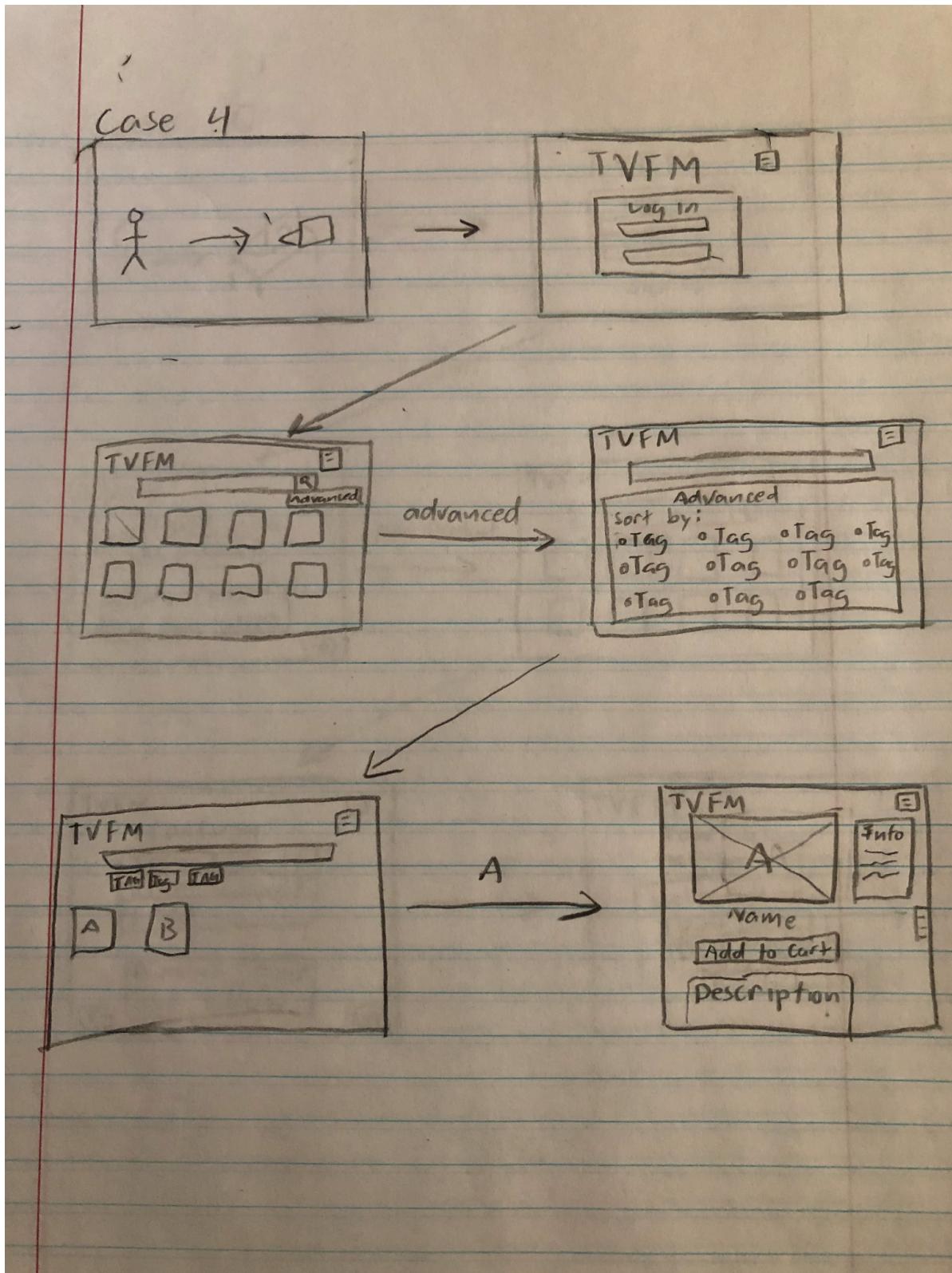
Use Case 2: Vendor Inventory



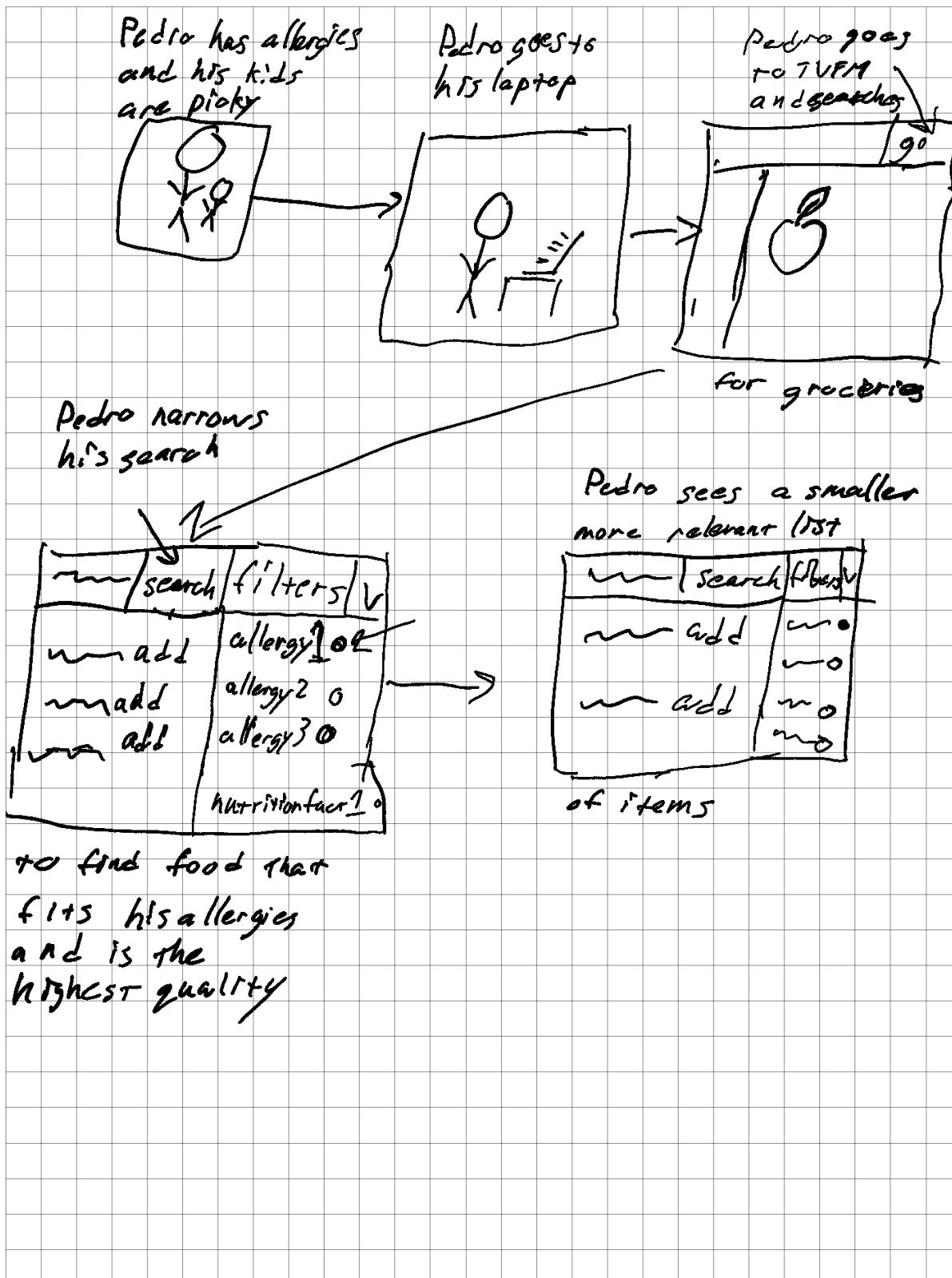
Use Case 3: Delivery



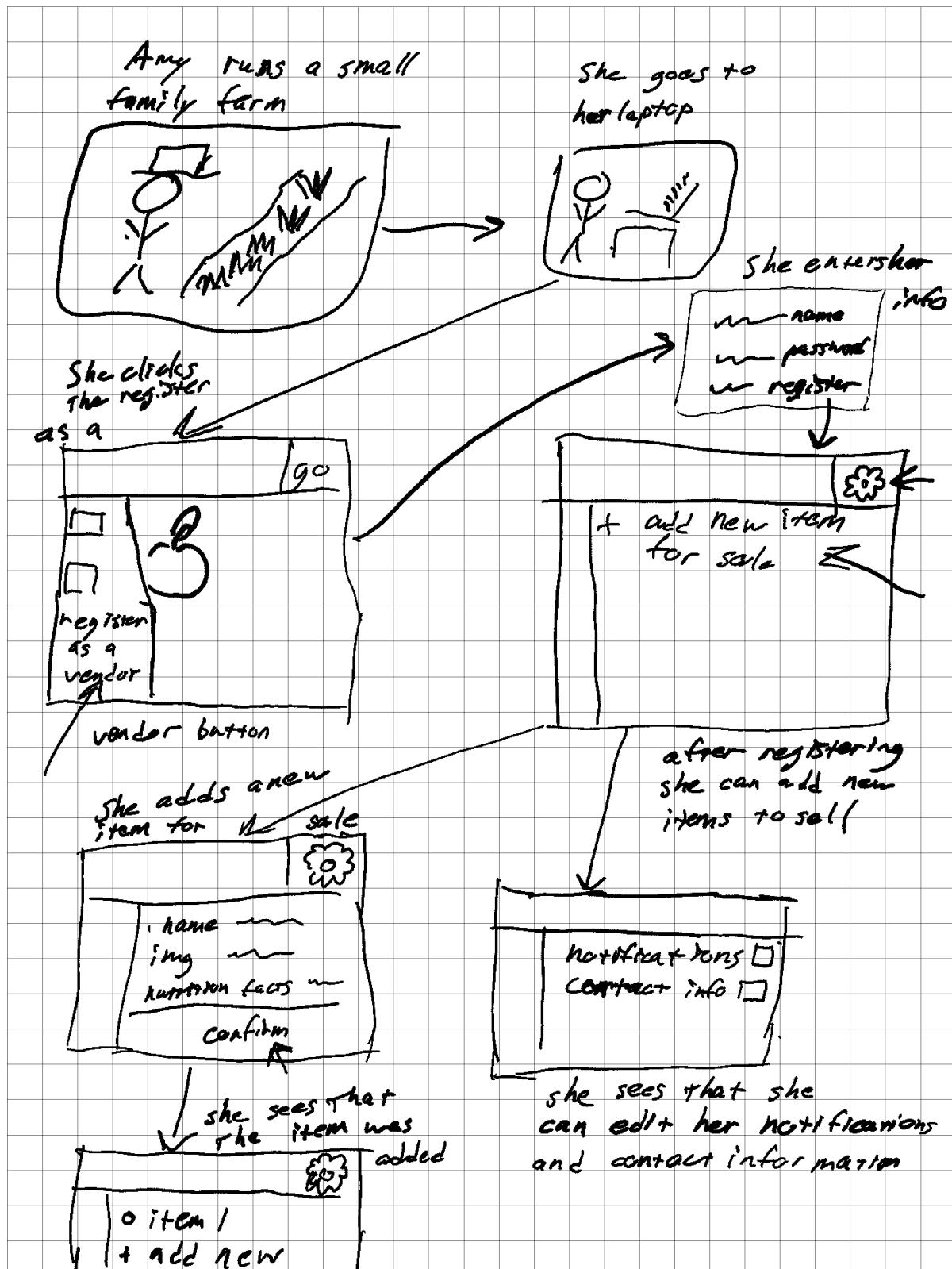
Use Case 4: Health Conscious Individual



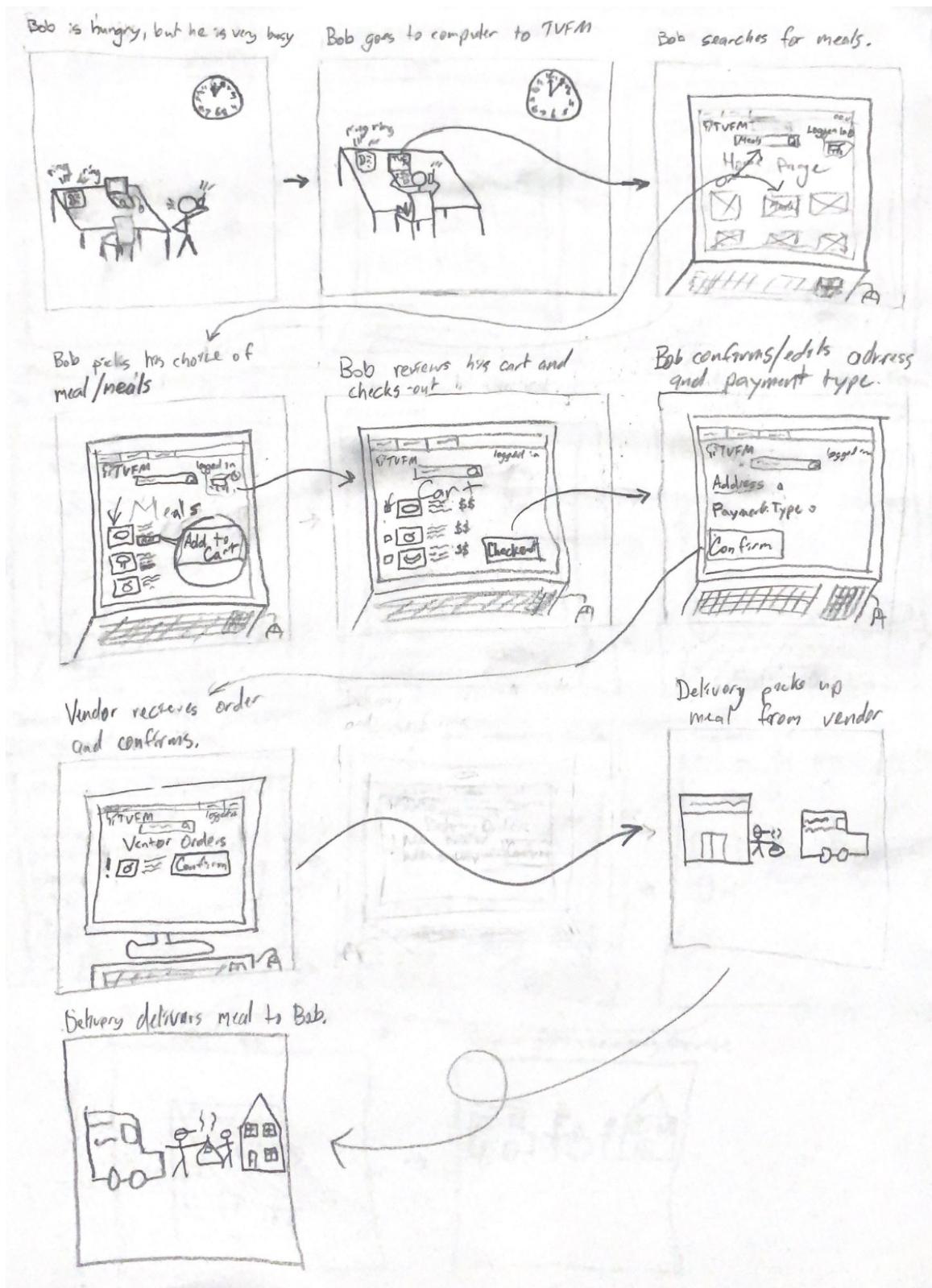
Use Case 5: Dietary Requirements



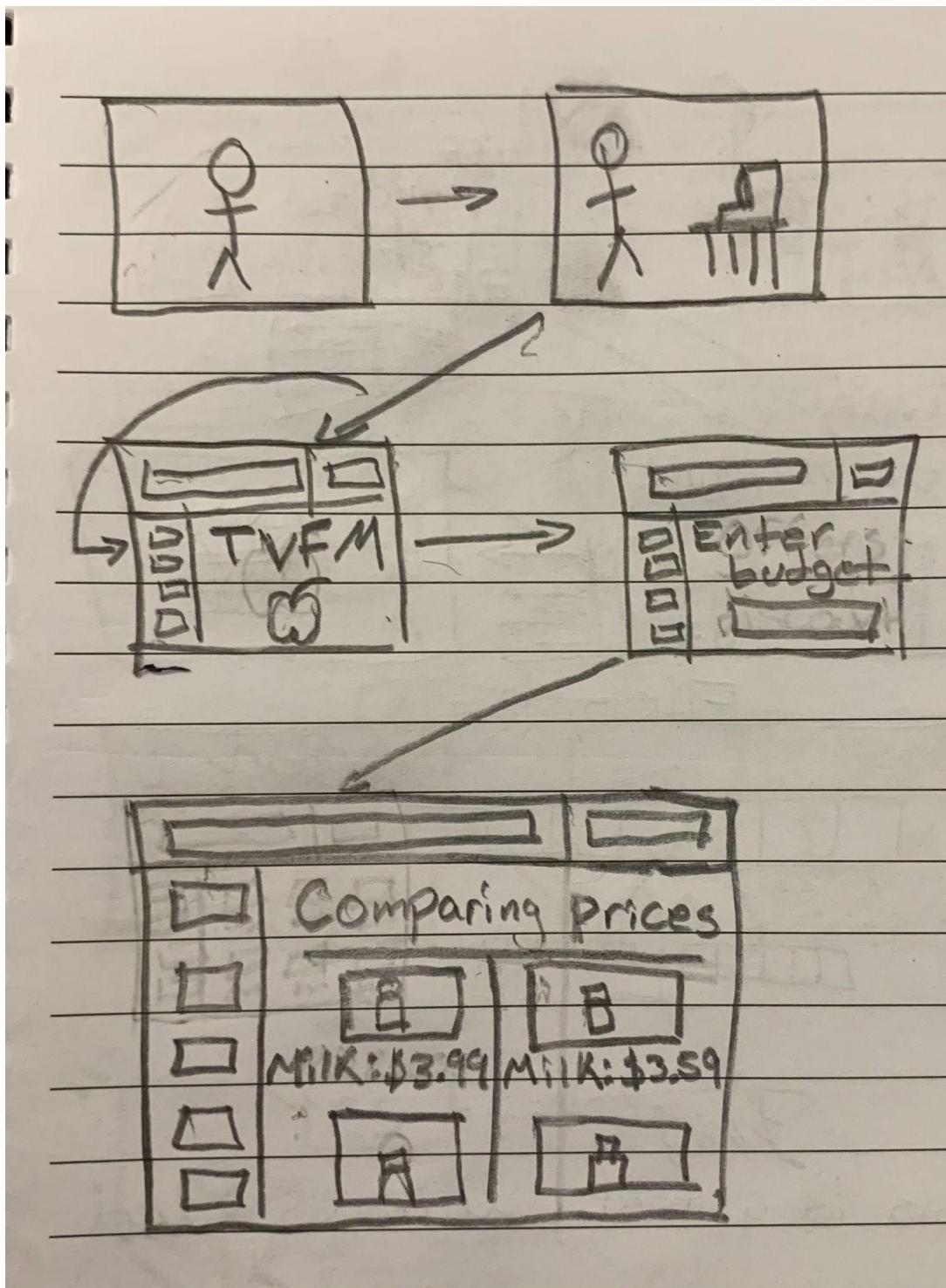
Use Case 6: Small Scale Farmer



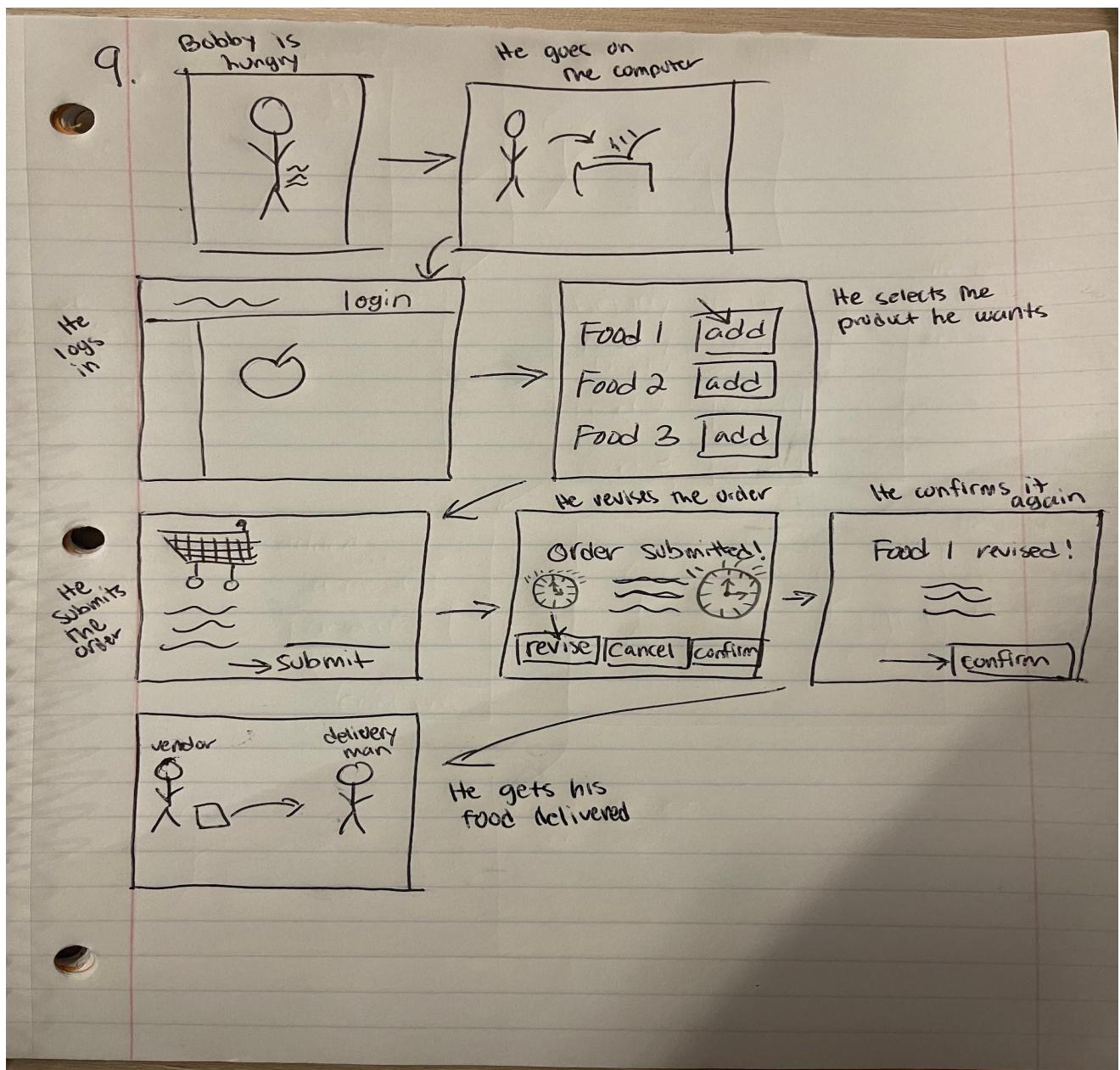
Use Case 7: Quick lunch



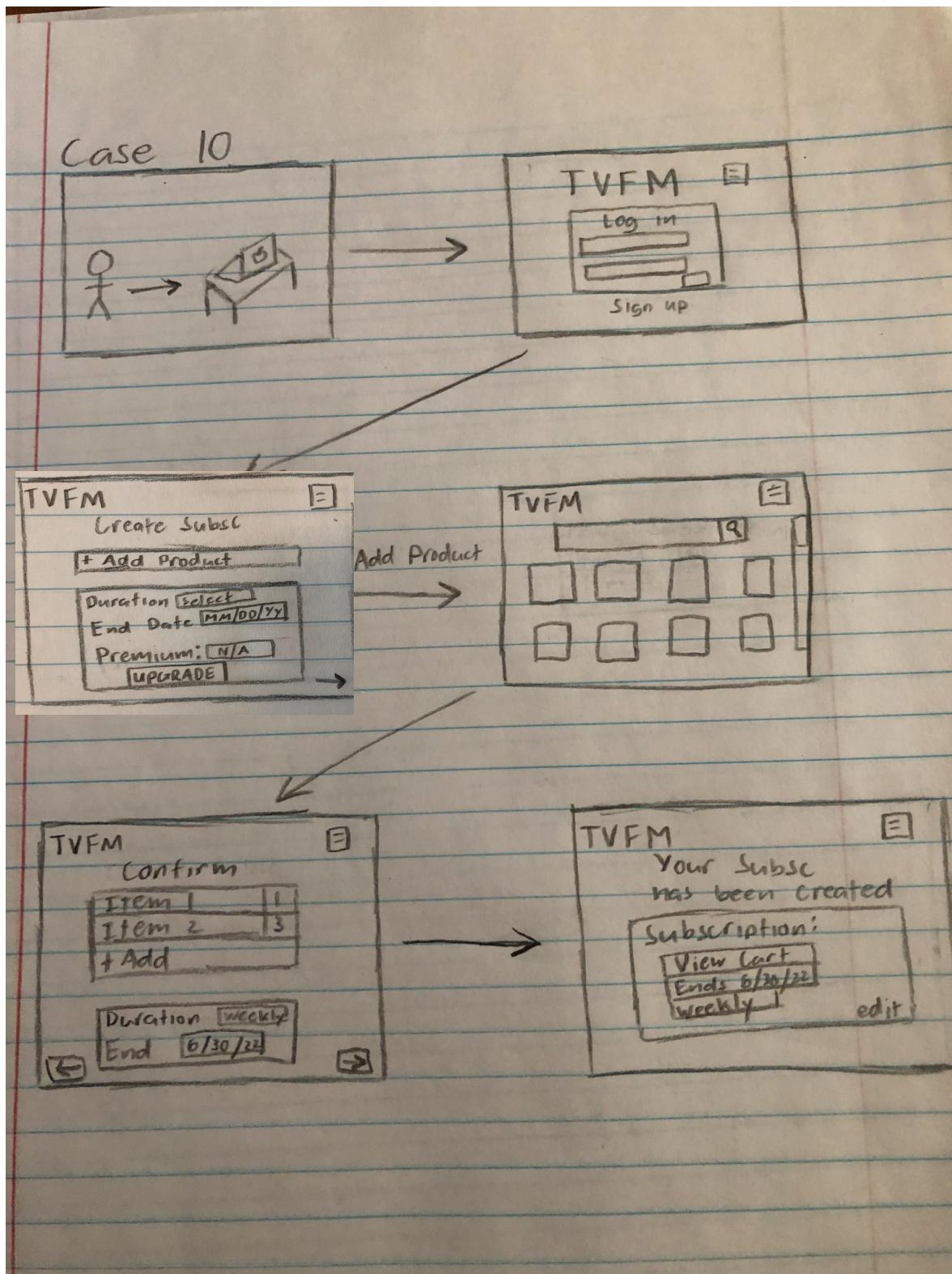
Use Case 8: Affordable produce



Use Case 9: Revising an Order



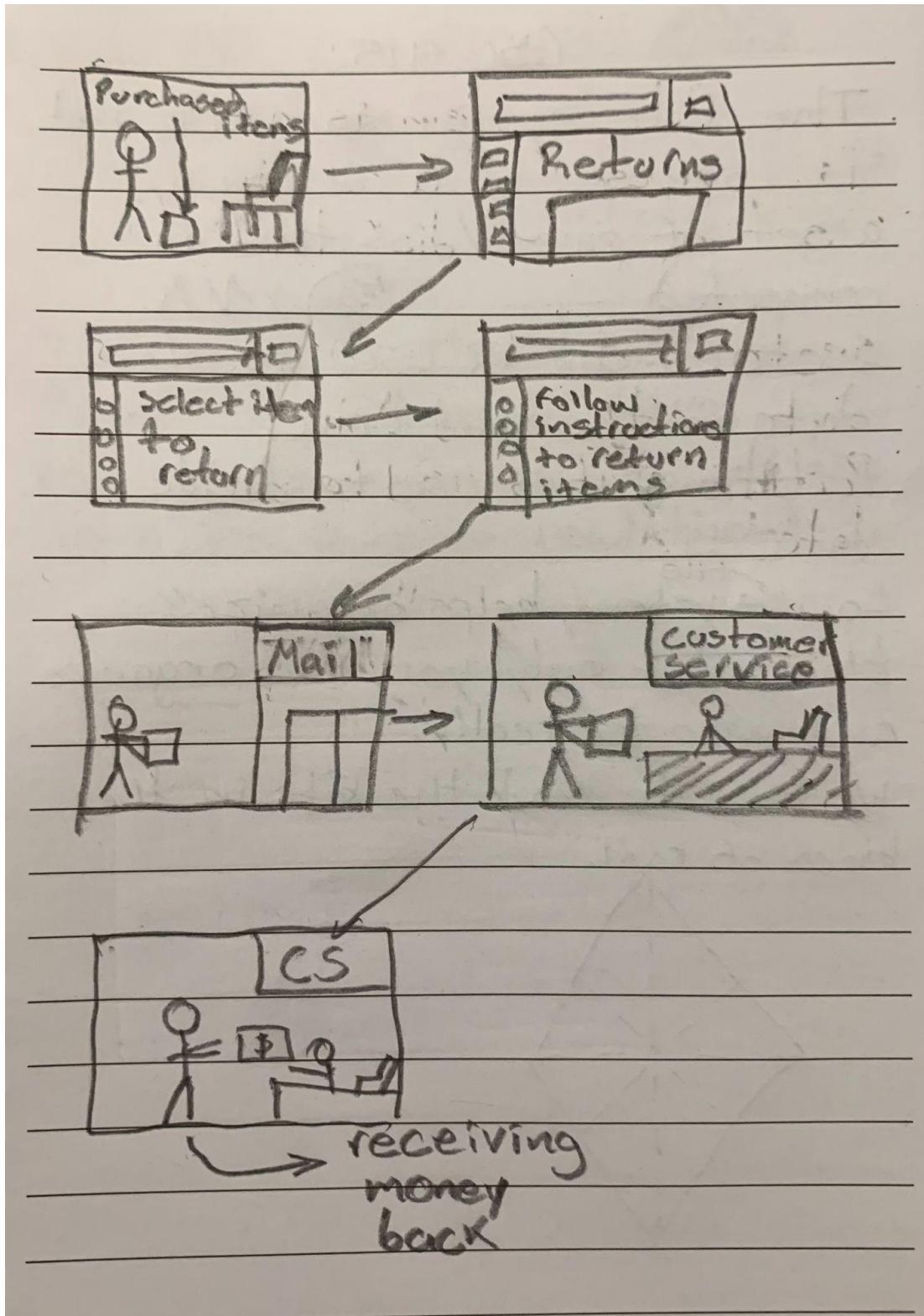
Use Case 10: Catering



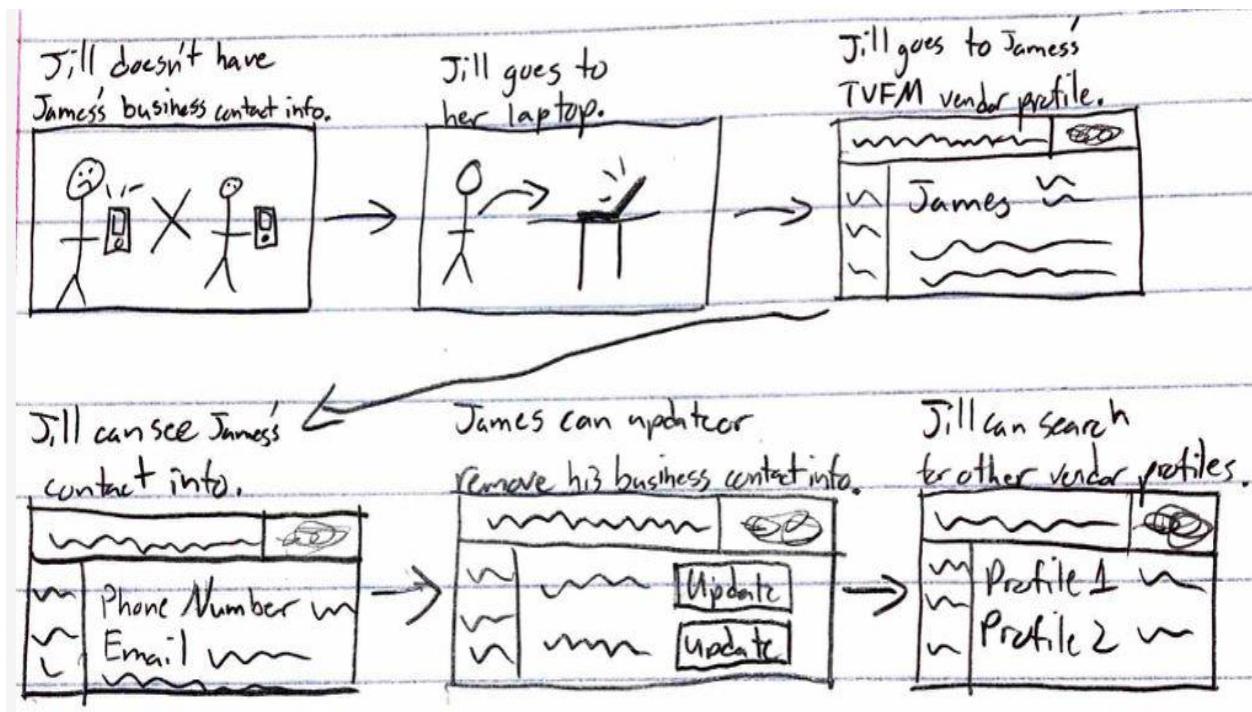
Use Case 11: Meal planning



Use Case 12: Returning items



Use Case 13: Contact Information

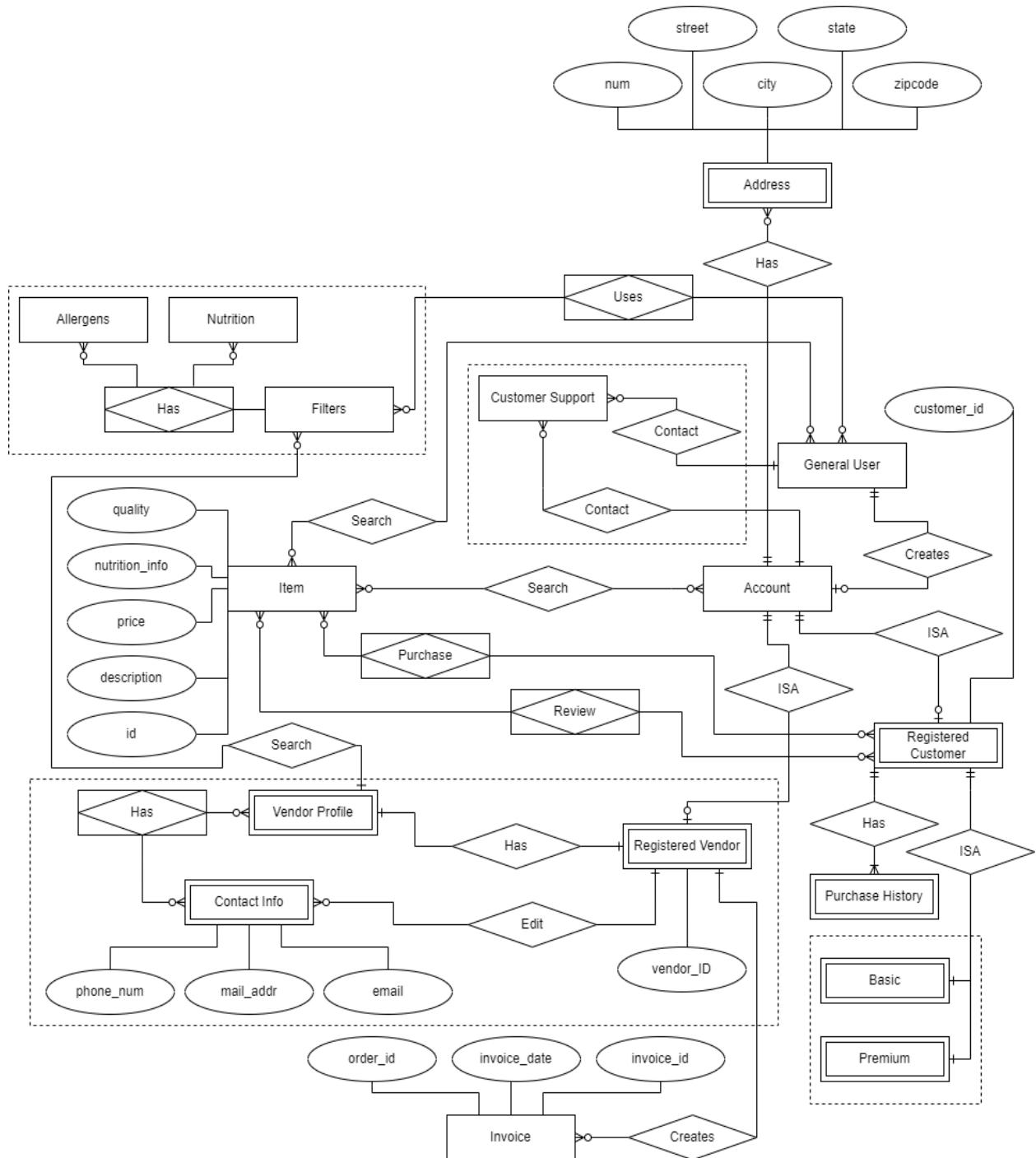


High level Database Architecture and Organization

1. A general user shall be able to enter their data and sign up for our services.
 - a. Entities: General User, Account
 - b. Relationship: Creates
 - c. Abstract Quantitative Properties: One and Only One <-> Zero or One
2. A general user shall be able to set up a registered customer account.
 - a. Entities: Account, Registered Customer (Weak Entity)
 - b. Relationship: ISA
 - c. Abstract Quantitative Properties: One and Only One <-> Zero or One
3. A general user shall be able to set up a registered vendor account which will allow them to sell their items on our site.
 - a. Entities: Account, Registered Customer (Weak Entity)
 - b. Relationship: ISA
 - c. Abstract Quantitative Properties: One and Only One <-> Zero or One
4. A registered customer shall be able to purchase items.
 - a. Entities: Registered Customer, Item
 - b. Relationship: Purchase (Associative Table)
 - c. Abstract Quantitative Properties: Zero to many <-> Zero to many
5. A registered customer shall be able to post reviews for an item.
 - a. Entities: Registered Customer, Item
 - b. Relationship: Review (Associative Table)
 - c. Abstract Quantitative Properties: Zero to many <-> Zero to many
6. A registered customer shall be able to view their purchase history.
 - a. Entities: Registered Customer, Purchase History
 - b. Relationship: Has
 - c. Abstract Quantitative Properties: One and Only One <-> One to many

7. A general user shall be able to contact customer service if they have any issues.
 - a. Entities: General User, Customer Support
 - b. Relationship: Contact
 - c. Abstract Quantitative Properties: Zero to many <-> Zero to many
8. A registered customer shall be able to contact customer service if they have any issues.
 - a. Entities: Registered Customer, Customer Support
 - b. Relationship: Contact
 - c. Abstract Quantitative Properties: Zero to many <-> Zero to many
9. A registered vendor shall be able to edit their contact information.
 - a. Entities: Registered Vendor, Contact Information
 - b. Relationship: Edit
 - c. Abstract Quantitative One <-> Zero to many
10. A general user or a registered customer shall be able to view the nutrition information of an item.
 - a. Entities: Filters, Nutritional Information
 - b. Relationship: Has (Associative Table)
 - c. Abstract Quantitative Properties: Zero to many <-> Zero to many

ERD:



High Level APIs and Main Algorithms

Home Page:

-

Vendor Registry Page:

-

Customer Registry Page:

-

Delivery Registry Page:

-

Login:

- Body should contain email and hashed password.

Search:

- Body should contain filters and what the general user searched for.

Checkout:

- Body should contain all items the user wants.

Vendor Profile:

- Body should contain the vendor name/identifier.

Update Products:

- Body should contain the product identifier and what to change.

Register Vendor:

- Body should contain all attributes of a new vendor.

Add New Product:

- Body should contain products and all attributes.

Revise Order:

- Body should contain an order identifier and what items are removed/changed.

Start Recurring Order:

- Body should contain all items to deliver and how often.

Add Review:

- Body should contain an item identifier and the review.

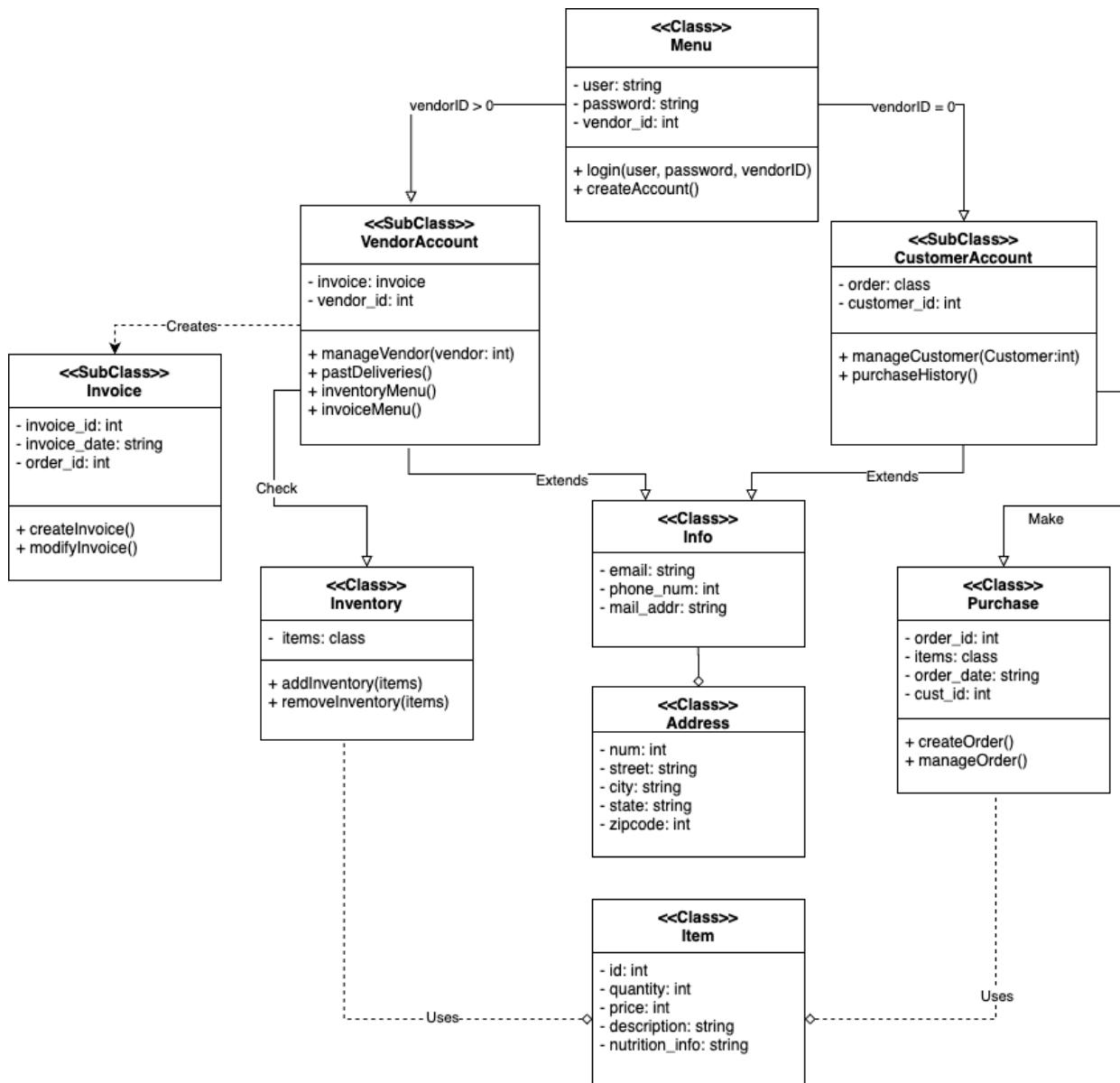
Searching Algorithm:

- Will search for an item within a certain radius of a zip code or address.

Time Estimation Algorithm:

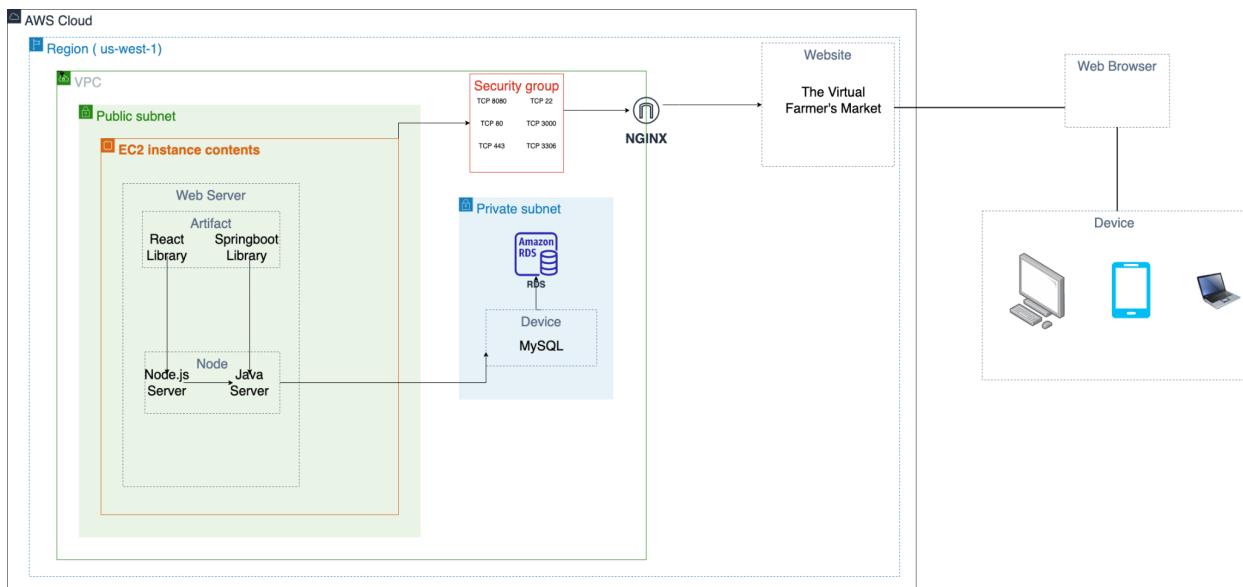
- Will estimate delivery time of an item based on distance and traffic between the two locations (vendor and customer).

High Level UML Diagram

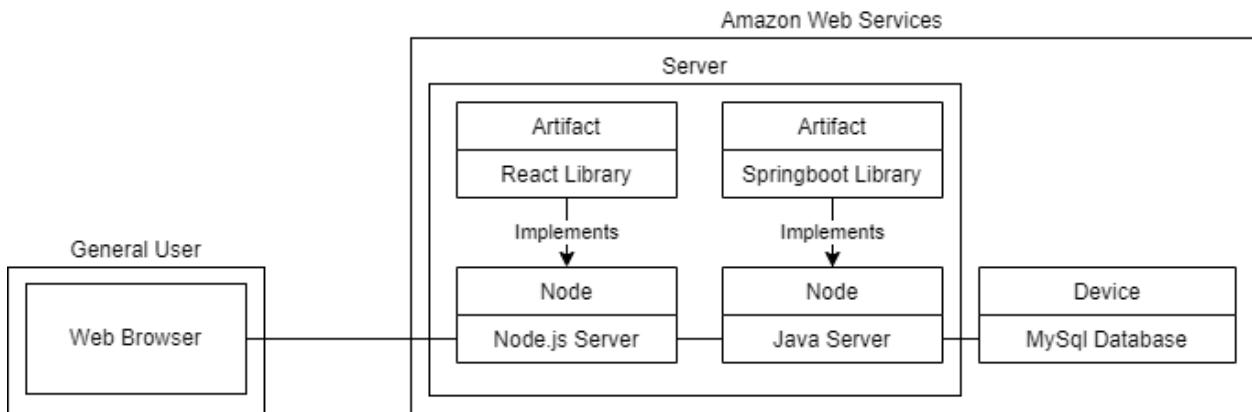


High Level Application Network Diagram and Deployment Diagram

Network Diagram:



Deployment Diagram:



Key Risks

Skill:

- No one in our team has done a UML diagram before. So it is a very new concept to us.
 - We will look at the slides provided in iLearn in order to learn more about UML diagrams.

Schedule:

- There are no known scheduling risks.

Technical:

- There are no known technical risks.

Teamwork:

- There are no known teamwork risks.

Legal/Content:

- There are no known legal/content-related risks.

Project Management

Using Trello I will assign tasks to everyone. Tasks will generally be due by the next meeting. Smaller tasks will be due the day after they are assigned. In the future, I will use Trello to manage tasks and I will use the same due-date system.

We meet every Monday and Friday for about 30 minutes. Also before the due date of the next milestone, we meet on Wednesday.

List of team contributions

Seth Pavlicek:

- Data Definitions
- High Level API
- Deployment Diagram
- UI Mockups: 1, 5, 6

Alex Bjeldanes: 9/10

- UML and ERD Diagrams
- Database Requirements
- UI Mockups: 2, 13
- Milestone 2 Document Cleanup

Armando Partida: 8/10

- UML and ERD Diagrams
- Backend Setup
- UI Mockups: 8, 12

Angel Antunez: 6/10

- Register Page
- UI Mockups: 3, 9

Igor Tsygankov: 9/10

- Application Networks Diagram
- Header for Frontend
- UI Mockups: 7, 11
- AWS Setup

Michael Abolencia: 6/10

- Login Page
- UI Mockups: 4, 10