



SOEN342
Software Requirements and Specifications

YumYumExpress
(Phase 1)

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GitHub Link

<https://github.com/lyeskara/SOEN342>

Abstract

This document describes the process of conducting a software engineering requirements elicitation, evaluation, and specification for a food delivery app called "YumYumExpress". The process includes conducting comparative studies of existing products such as UberEats, Doordash, and Skip The Dishes, as well as using elicitation techniques such as survey method and document analysis method to gather information about customer needs and preferences. The document also includes a detailed product description of "YumYumExpress" and its key features. The results of this analysis provide a solid foundation for the development of "YumYumExpress" and ensure that the app meets the needs and exceeds the expectations of its target customers.

1. Elicitation Techniques

1.1. Surveys

One effective method for gathering stakeholder input is through the use of surveys. Surveys can be particularly valuable in gathering requirements from the app's final users, as they will be the ones interacting with the user interface (UI).

When designing the survey, it is important to carefully consider both the questions and the types of questions used. To gain a comprehensive understanding of the requirements, it is essential to ask the right questions. Additionally, the format of the questions may vary depending on the topic being addressed. For example, some questions may be open-ended, while others may require multiple choice or a rating scale response.

The number of survey questions were kept between 15-20, as it is the usual number for customer surveys according to pewresearch. Furthermore, for the closed-ended questions the options were kept between 3 to 6 options.

The survey questions were designed as a group, where each question is designed in order to give us insight into a certain aspect of behavior and experience of the final user. For instance, question 6 in the survey is supposed to give us information regarding the design of apps since apps designed specifically for smartphones may differ from other mediums.

The survey questions can be found at the end of the document in Addendum A. Sample responses can also be found as part of Addendum B

1.1.1. Survey Results

After analyzing the answers to the survey, we see that:

- Most people use food delivery on their smartphones, which indicates that we should take the mobile-first approach on our design and implementation.
- Many users prefer food delivery for the variety they can access when using the app.
- Many users prefer food delivery because they do not have time to prepare food at home.*
- Many users consider the timeliness of the order and user reviews the most important aspect of the experience.*
- Many users complain about having to reheat their food upon delivery.*
- Many users dislike having issues regarding the payment system.
- Many users would like a fast registration process.
- Many users would like to track their order.

It is clear from the results that users place a high value on the speed and efficiency of food delivery apps. This is indicated by the fact that many of the results that were highlighted with an asterisk (*) are related to time. This can include things like accurate estimated delivery times, real-time tracking of food delivery, and the ability to schedule future deliveries.

1.1.2. Requirements identified

Based on the survey results, the following requirements were identified:

- The app algorithm must result in the order reaching the consumer in the shortest amount of time.
- The app must be designed around smartphones, also called mobile-first approach.
- The app must offer menus maintained and updated all the time.
- The app must offer order tracking to the end users.
- The app must allow fast registration, for instance through the usage of other platforms such as Google or facebook.
- The app must implement different seamless payment systems to avoid any issues with the payments.

1.1.3. Advantages and disadvantages of the technique

Advantages:

- Surveys are a reliable and easy to understand method of gathering data. They are designed to be straightforward, with clear and concise questions.
- Surveys generate data that is easy to analyze. The responses can be quantified and grouped in various ways, making it simple to identify patterns and trends in the data. Surveys can be offered to a large population, which allows for a wide range of perspectives and input to be gathered. This is especially useful when studying a diverse population.

- Surveys are relatively cheap to conduct, as they can be administered online, via email, or by mail, which eliminates the need for expensive data collection equipment or staff.

Disadvantages:

- Surveys may include biased questions, which can skew the results and lead to inaccurate conclusions. This can happen due to the wording of the question.
- The order of the questions in a survey can influence the responses, as participants may be more likely to answer one way or another depending on the questions they have been asked previously.
- Surveys may include wrong questions that are not well-designed or not related to the research topic, which may lead to inaccurate or irrelevant data being collected.

1.2.Document Analysis

In this part document analysis technique was used to gather information and identify requirements for the new food delivery app. Three resources from the internet were chosen for our analysis as they give a broad range of information on what users liked and disliked in food delivery apps.

1.2.1. Documents analyzed

- [modern life: food](https://medium.com/building-h/a-survey-of-modern-life-food-12e03503703f#:~:text=Over%2090%25%20of%20users%20of,their%20own%20meal%20(47.9%25).)
 - [https://medium.com/building-h/a-survey-of-modern-life-food-12e03503703f#:~:text=Over%2090%25%20of%20users%20of,their%20own%20meal%20\(47.9%25\).](https://medium.com/building-h/a-survey-of-modern-life-food-12e03503703f#:~:text=Over%2090%25%20of%20users%20of,their%20own%20meal%20(47.9%25).)
- [Survey of 28 food deliverers](https://www.deseret.com/2019/8/3/20755910/survey-28-of-food-app-deliverers-said-they-ve-stolen-your-food)
 - <https://www.deseret.com/2019/8/3/20755910/survey-28-of-food-app-deliverers-said-they-ve-stolen-your-food>
- [Survey Food delivery consumer](https://www.foxbusiness.com/lifestyle/food-delivery-apps-consumer-frustration-survey)
 - <https://www.foxbusiness.com/lifestyle/food-delivery-apps-consumer-frustration-survey>

1.2.2. Analysis results

The most relevant statistics determined from the documents are as follows:

- 21.2% of dishes were missing or incorrect
- 17% of customers complained about the food temperatures
- 16% of customers reported that their orders were received late
- 63% of customers prefer to tip through the app
- 37% of customers tip with cash
- 59% of customers prefer to decide on the tip we ordering

- 53% of customers tip differently based on the weather
- 11% of customers reported that prices are inconsistent

1.2.3. Requirements determined

Based on these statistics, the following requirements were established:

- The food delivered need to be the exact food ordered (accuracy)
- The food delivered need to be kept at the right temperature when delivered to customers
- The app must have consistent prices
- The app must have a flexible tipping system
- The app must allow cash as a tipping option

1.2.4. Advantages and disadvantages of the technique

Advantages:

- It provides a comprehensive examination of a broad range of data from a multitude of resources.
- Using this technique let us identify key informations that can be used to create requirements for our app
- Document analysis is efficient for gathering data since it does not require resources like surveys and questionnaires

Disadvantages:

- The data gathered are limited to the scope of the document that are used
- The data gathered can be biased to the resources
- The data may be outdated and limited.

2. Comparative Study

2.1. UberEats (<https://www.ubereats.com/ca>)

2.1.1. Description:

Customers can use the UberEats app to get food from nearby restaurants through the food delivery service UberEats. The service is a division of Uber Technologies and is accessible in several locations all over the world. UberEats' broad selection of restaurants and quick delivery times are two of its primary benefits. It also includes a user-friendly interface that makes it simple for clients to track their products and get in touch with delivery partners.

2.1.2. Features

- Searching
 - The UberEats app allows customers to easily search for restaurants either through their proximity or through categories related to the type of cuisine. This allows users to easily find what they are craving
- Payment Options
 - Customers can pay for their food delivery using a credit card, PayPal, or Uber Cash.
- Rating and Reviews
 - UberEats allows customers to rate their delivery experience and leave reviews for restaurants.
- Integration with other apps
 - UberEats is integrated with other apps like Uber, Uber for Business and Uber for Eats Pass, allowing customers to order food delivery through these apps as well.

2.2. SkipTheDishes (<https://www.skipthedishes.com/>)

2.2.1. Description

A food and groceries delivery app that is part of Just Eat Takeaway.com, which is a global online food delivery marketplace. You can sign up to be a partner and have your products delivered through their system. In addition, you can also sign up as a courier to deliver orders to customers. Overall, it allows customers to easily find what they are looking for (either from a restaurant or from other food stores) and track their orders as they are delivered.

2.2.2. Features

- Loyalty system
 - You earn points in the system for every dollar that you spend. These points can then be redeemed for a dollar value; for each 1000 points redeemed, you receive a dollar in credit. There are two tiers for loyalty: An orange status (5 points per dollar) and a gold status (10 points per dollar). You can upgrade your tier by ordering more frequently
- Shopping Categories
 - You can filter the available shops using buttons available on the home page. You can filter for: Deals, Convenience, Alcohol and Groceries.
- Sorting Capability

- You can sort the available restaurants based on its “Skip score”, Time Estimate or by Delivery Fee.
- Favorites
 - You can “favorite” a restaurant so that it appears at the top of your home page when you log in.
- A food wiki
 - An encyclopedia of recipes that is free to use. It is included as part of your account.

2.3.DoorDash (<https://www.doordash.com/en-CA>)

2.3.1. Description

DoorDash is a food delivery application that has its focus on restaurant deliveries and a smaller one on grocery deliveries as well. There are three primary users of the application. Customers, who buy the food from the restaurant and receive the deliveries. Dashers, who deliver the food from the restaurants and receive their pay from a flat rate plus tips as well as bonuses based on time of day and the speed of delivery. Lastly, restaurants and stores form the final group of users, they provide the goods by listing their restaurant on the application and receive money from the orders taking place. Door dash has two applications, one for the dashers and one for the clients.

2.3.2. Features

- Dash Pass
 - You can pay 9.99\$/month for zero delivery fees from and reduced service fees for orders over 15\$ from participating restaurants
- Large selection of categories
 - Easy to pick a restaurant to order from, with categories such as fastest delivery, most popular, deals, affordable meals and a search option
- Past ordering history
 - Allows the user to keep a better budget and manage expenses easier with a section showing the recent order they made
- User Reviews
 - The user can see ratings left by customers and evaluate the quality of food from other users.
- Allows pickup as well
 - Should the customer desire it, they may simply treat this app as an extension of the restaurant's application and order and pick up the food themselves.

2.4. Comparison and Analysis

"YumYumExpress" is similar to UberEats, Doordash, and Skip The Dishes in that all four apps provide a convenient platform for ordering food from local restaurants. All four apps allow customers to browse menus, place orders, and track the status of their delivery. Additionally, all four apps offer payment options, user registration and login, and customer support.

However, "YumYumExpress" has some unique features that set it apart from the other three apps. For example, "YumYumExpress" has a more personalized profile page that allows customers to store their important information and view their order history. Additionally, "YumYumExpress" has a more robust search bar that allows customers to select the desired items and specify all the necessary details about the order.

Another difference between "YumYumExpress" and the other three apps is the loyalty program feature. "YumYumExpress" has a loyalty program that rewards customers for their repeated use of the app, which is not available in UberEats, Doordash, and Skip The Dishes.

"YumYumExpress" also offers a range of customization options for customers, such as the ability to schedule meal plans in advance and the ability to place group orders. Furthermore, "YumYumExpress" has a review and ratings system to help customers make informed decisions about their food choices.

In conclusion, "YumYumExpress" has some similarities with UberEats, Doordash, and Skip The Dishes, but also has several unique features that make it a standout product in the food delivery app market.

3. Product Presentation

YumYumExpress is a food delivery app that enables users to browse menus, place orders, and track deliveries from local restaurants. The app is designed for use on mobile devices and provides an easy and convenient way to order food and have it delivered to your door. Users can search for their favorite restaurants and view their menus, customize their orders, choose from a variety of payment options, and track their deliveries in real-time. With YumYumExpress, users can easily rate and review the restaurants and the food they received, and can also contact customer support if they have any issues with their orders. Whether you're craving for some fast food or fine dining, YumYumExpress is the perfect solution for satisfying your cravings at the comfort of your home.

3.1. Features

3.1.1. Splash screen

Attracts users with an aesthetically pleasing registration and login form.

3.1.2. Profile page

Stores all the important information in one place: personal details, order history, etc

3.1.3. Search bar

Allows customers to select the desired items and specify all the necessary details about the order

3.1.4. Payment

Enables the option to pay for the order

3.1.5. User registration and login

Allows users to create an account and log in to the app.

3.1.6. Restaurant browsing

Allows users to browse through menus and view restaurant information, such as ratings and reviews.

3.1.7. Order placement

Allows users to select items from a restaurant's menu, specify any special requests or instructions, and place their order.

3.1.8. Order tracking

Allows users to view the status of their order and track the delivery in real-time.

3.1.9. Customer support

Allows users to contact customer support in case of any issues or concerns.

3.1.10. Notifications

Allows the app to send notifications to users, such as order updates or special deals and promotions.

3.1.11. Loyalty program

Allows users to earn rewards for repeat orders and encourages them to order more frequently.

3.1.12. Reviews and ratings

Allows customers to rate and review their experiences with different restaurants and delivery drivers.

3.2. Original Features

After performing both requirements analysis and comparative analysis, we are proposing the following features to our product which we believe will add value to the app:

- Diet Mode: Food delivery does not have to be unhealthy food. This feature allows end users to maintain their dietary restrictions while using our food delivery app. Simply set up your diet preferences and the app will only suggest dishes that fit within those guidelines. With this feature, our users do not have to comb through menus and worry about compromising your diet.
- Customer Info: This feature allows restaurant owners to access data regarding their customers as a group. We consider the restaurant owner part of the app and without them this ecosystem will not exist. Thus, we believe that this feature will help the restaurant owners expand and provide better service to their customers.

4. Conclusion

In conclusion, we have completed a thorough analysis of the food delivery app market. We have used two elicitation techniques, the survey method and document analysis method, to gather information about customer needs and preferences. Through our comparative study of the existing products UberEats, Doordash, and Skip The Dishes, we were able to identify key features that are important to customers and that set these apps apart from one another.

Based on our findings, we have developed a comprehensive product description for our app "YumYumExpress", which includes a wide range of features.

Overall, our analysis has provided a solid foundation for the development of "YumYumExpress" and will help ensure that the app meets the needs and exceeds the expectations of our target customers.

Addendum

A) Survey

As part of our requirement elicitation we designed a survey meant to ask our customers about the values that they have when it comes to food apps. The survey is quite lengthy and so it has been moved here to not clutter the elicitation technique. Below are the questions we came up with.

Survey questions:

1- Do you order food online?

Yes

No

2- If yes, from which company do you prefer?

UberEats

DoorDash

SkipTheDishes

Others

3- Are you satisfied with the app?

Yes

No

4- How often do you order food online?

Daily

Weekly

Monthly

5- Which meal do you typically order food online?

Breakfast

Lunch

Snacks

Dinner

6- In general, how do you prefer to order food?

mobile app

web browser

phone

7- What is the approximate money you spend on ordering food per time?

less than 50

Between 50 and 100

Between 100 and 150

more than 150

8- What feature do you wish to have in a food delivery app?

9- Why do you prefer online food delivery?

10- What do you consider to be the most important aspect when using a food delivery app?

11- What is the least pleasant aspect of your experience when ordering food online?

B) Example Survey Answers

Answer 1:

1- Do you order food online?

Choice: Yes

2- If yes, from which company do you prefer?

Choice: UberEats

3- Are you satisfied with the app?

Choice: Yes

4- How often do you order food online?

Choice: Weekly

5- Which meal do you typically order food online?

Choice: Lunch

6- In general, how do you prefer to order food?

Choice: mobile app

7- What is the approximate money you spend on ordering food per time?

Choice: less than 50

8- What feature do you wish to have in a food delivery app?

Answer: Fast registration process for the first time.

9- Why do you prefer online food delivery?

Answer: I get to have access to a variety of the menus.

10- What do you consider to be the most important aspect when using a food delivery app?

Answer: Order timeliness is the most important aspect of the experience.

11- What is the least pleasant aspect of your experience when ordering food online?

Answer: It is unpleasant to have to reheat food when it gets to me.

Answer 2:

1- Do you order food online?

Yes

2- If yes, from which company do you prefer?

Choice: DoorDash

3- Are you satisfied with the app?

Choice: Yes

4- How often do you order food online?

Choice: Monthly

5- Which meal do you typically order food online?

Choice: Dinner

6- In general, how do you prefer to order food?

Choice: mobile app

7- What is the approximate money you spend on ordering food per time?

Choice: Between 50 and 100

8- What feature do you wish to have in a food delivery app?

Answer: GPS tracking of the order from the store.

9- Why do you prefer online food delivery?

Answer: I do not have time to prepare food at home.

10- What do you consider to be the most important aspect when using a food delivery app?

Answer: User reviews of the restaurants and their services.

11- What is the least pleasant aspect of your experience when ordering food online?

Answer: Issues with the payment methods and failure to place the order.