Tasty Express

Tasty Express Delivery Services
Software Requirements Specification
For Online Restaurant Systems

Version 1.0

Revision History

Date	Version	Description	Author
28/03/22	1.0	First Rough Draft of Tasty Express	Samuel Wolnerman Gaurav Kuwar Mohammed Fahad Usman Abbas

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Software Requirements Specification

1. Introduction

This design report will give an overview of our design for the entire online restaurant system. The purpose and scope will be clarified along with key definitions for understanding the entirety of this document.

1.1 Purpose

The purpose of Tasty Express is to give users the capability to either order or manage food services at a restaurant depending on the user's role. For external users, the purpose of this app is to have food from a restaurant delivered to them in both the cheapest and fastest manner possible. Customers will be put into three categories of regular customers, V.I.P.s and guest users. The design constraints of Tasty Express will be the database used, as it will only be able to support a limited number of users, as well as the fact that to simplify delivery services in our app users can input a location for a delivery to be dropped off to, but it will have a random amount of time to receive its order between 20 and 50 minutes. The restaurant and menu items displayed in Tasty Express will represent a sample of what is served at a restaurant but will not copy any real-world restaurant or menu. The development of Tasty Express will be written in Python3 through an IDE or Text Editor.

1.2 Scope

Food delivery systems are more in demand than ever before since the pandemic. This app will create an online presence for restaurants and help get their food to their consumers. It allows more people to access the restaurant, view the menu, and order food online from the restaurant. It will also have a management system for restaurants that will allow food to be delivered in an organized fashion. The app will be convenient and easy-to-use for visitors, customers, and restaurant employees. The app is based on a relational database with functions for ordering food for customers and management for restaurant employees. Overall, we hope to provide a great consumer experience and help the restaurant succeed online.

1.3 Definitions, Acronyms, and Abbreviations

Name of Project

- **TE - Tasty Express**

Types of Users

- **Customer** - Users who can order, pay, and evaluate food and delivery of an order. There will be three subtypes of customers for each restaurant: visitors, registered customers, and VIP customers, each receiving different prices. VIP status is restaurant specific.
- **Manager -** Each store has a manager who decides salary for chefs and delivery drivers, and handles complaints and management of customers, and responses to them.
- **Delivery Person -** Assigned deliveries by queue of delivery drivers. A restaurant will have a minimum of two delivery drivers.
- **Chef -** Prepares food to be given to customers or delivery drivers by a queue. Chefs create the menus for restaurants with prices for each item, and decide which special items VIP customers can order.

Types of Customers

- **Visitors**
- **RC** - Registered Customer
- **VIP** - Very Important Customer

1.4 References

- Wei, Jie. “Project Description”, https://www.dropbox.com/s/siwvxfkdrvhzgss/proj_req.docx?dl=0.

- Maynooth, Nuyi. “SELF TEACHING ELEMENTARY PROGRAMMING SYSTEM (STEPS)”. “http://www.riceconsulting.com/templates/sample_requirement.pdf”

- Campisi, Victoria. “What Consumers Think about Food Delivery.” *The Food Institute*, The Food Institute, 30 July 2019, https://foodinstitute.com/focus/consumer-attitudes-toward-food-delivery-2/.

- “Global Online Food Delivery Market Report 2021: Market Size, Forecast, Insights, and Competitive Landscape, 2016-2020 & 2021-2027 - Researchandmarkets.com.” *Business Wire*, 28 Jan. 2022, https://www.businesswire.com/news/home/20220128005224/en/Global-Online-Food-Delivery-Market-Report-2021-Market-Size-Forecast-Insights-and-Competitive-Landscape-2016-2020-2021-2027---ResearchAndMarkets.com.

- Canter, Alex. “What Consumers Really Want from Food Delivery.” *Nation's Restaurant News*, 19 Nov. 2021, https://www.nrn.com/delivery-takeout-solutions/what-consumers-really-want-food-delivery.

1.5 Overview

- **People’s usual tendency of ordering food through delivery app :**

The Food Article is about statistics on how consumers crave a food delivery service.Similar food applications gave our group information on cost estimation and distance measurement for our food delivery path.

- **Consumer's view on online delivery option :**

  First and foremost focus for consumers is on free shipping but also they are gaining interest on options to pick up food by themselves and desire a personalized system that shows them foods matching to their preferences. Loyalty rewards programs are also gaining traction.

- **Global Food Delivery Market :**

  The online food delivery market is a very mature market in the first world, gaining heavy traction among the developing world. It centers around urban cities and not only helps transform the restaurant service to be more efficient and customer orientated, but also allows many people the opportunity of a full time job. The gig economy is currently estimated to be worth billions of dollars. Doordash, for example, a popular food delivery service is worth around 5 billion and it's only one of the many players in this area.

- **Exponential Growth Forecast :**

  The ability to order food on demand and get personalized recommendations have already turned the food delivery system into a lucrative option for consumers. Adding to that is the increased revenue for restaurants and especially as seen during covid, a lot of restaurants survived only because of the on demand food delivery services while dine in was banned. Global on demand food delivery service is attributed with low cost and fast convenient service and projected forecast seems lucrative.

  Our project is being developed with all these in mind, and here's a quick overview.

This specification is organized into the following sections.

Introduction: The main notion here is to introduce the contents of this specification report. This includes elaboration of the system's general purpose, providing and establishing definitions, and briefly touches the purpose and scope of our program,defines types of its user and lists references that are deemed helpful to craft this documentation overall.

Overall Description: In this part of the document, we will imply the overview of detailed functionality of our program and application including several applicable use case models. In addition to that, we included a list of assumptions and dependencies of the system.

Specification Requirements: This section serves the purpose of a detailed explanation and demonstration of use-case models and includes functionality of the optimal product that may not be included in the overall use case analysis and use case diagram.This in general, serves to explain the program specific requirements.

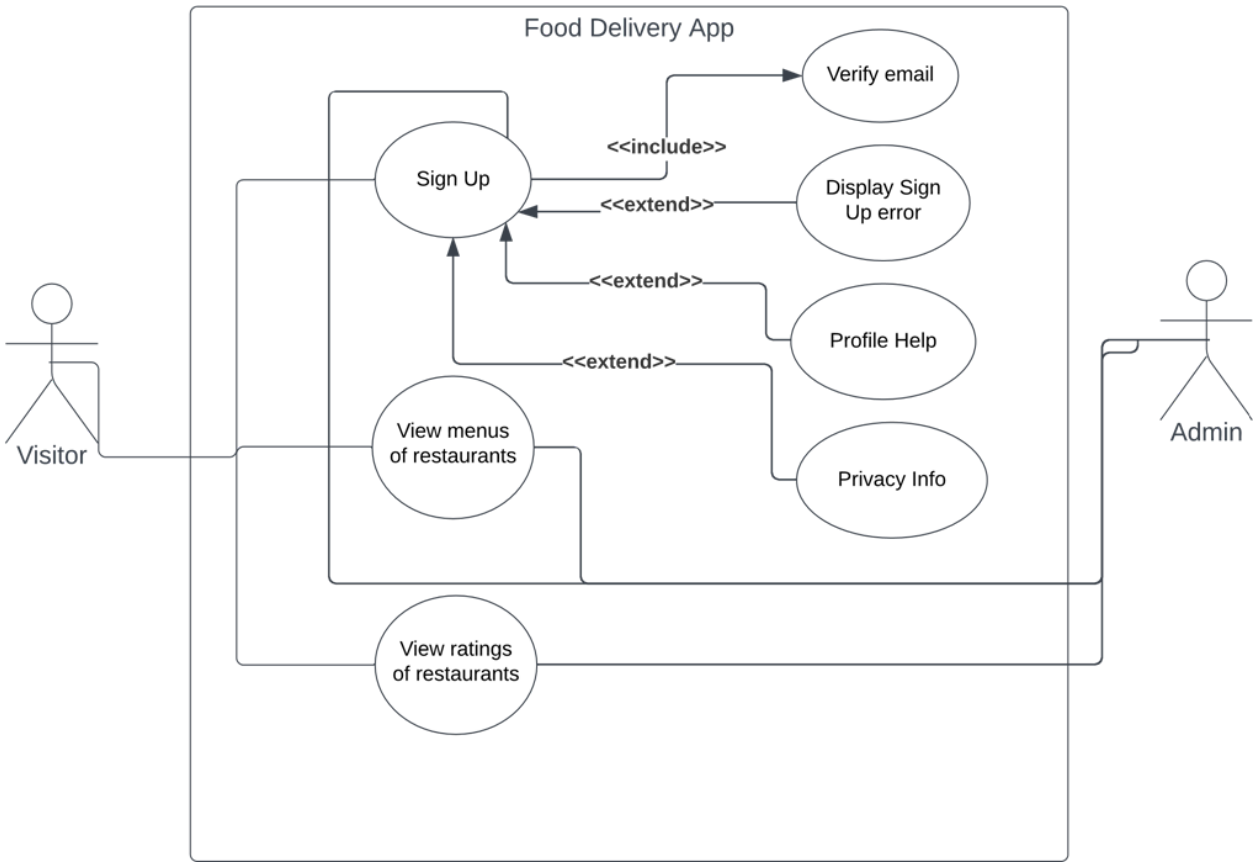
Supplemental Information: This section includes the user interface and step by step user experience demonstration through attachments which makes implicit use of specification requirements and makes it easier to deploy.

2. Overall Description

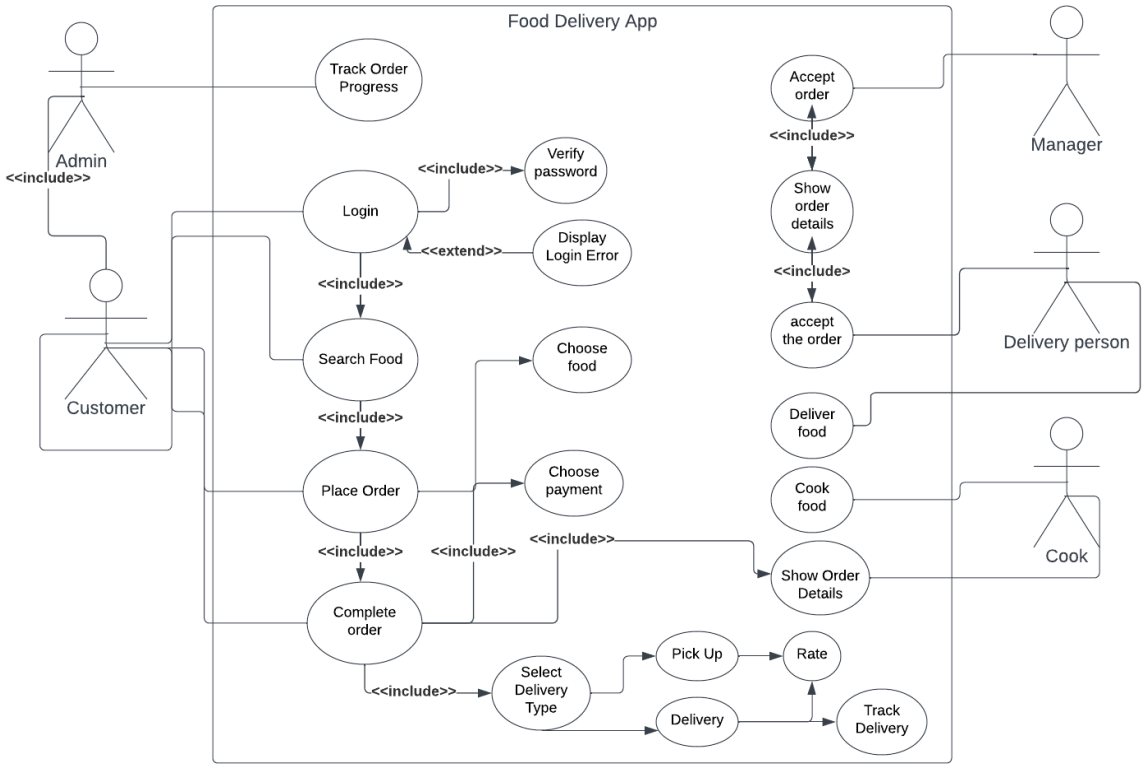
The objective of this project is to create an application that would imitate a real-world online restaurant that would allow different users to interact with the product. The product perspective of Tasty Express will be designed as a local application. This means that data such as restaurant information and the types of users are already predetermined within the application. With the number of users that will be present within the application, it would be important that each user is able to view its designated part of the application so that each task can be completed respectfully by its tasked user. As described earlier, this project will be developed as a local application which will pose certain constraints. Since the project will be developed locally, certain data would need to be predetermined and simulated such as the delivery processes. The application will try to imitate certain actions by pretending that these actions have been completed such as the delivery process talked about earlier. Lastly, this project will be dependent on certain things such as systems that can store and access data. The reason being is that data would need to be collected from different users as well as the data that would need to be accessed to run the application properly.

2.1 Use-Case Model Survey

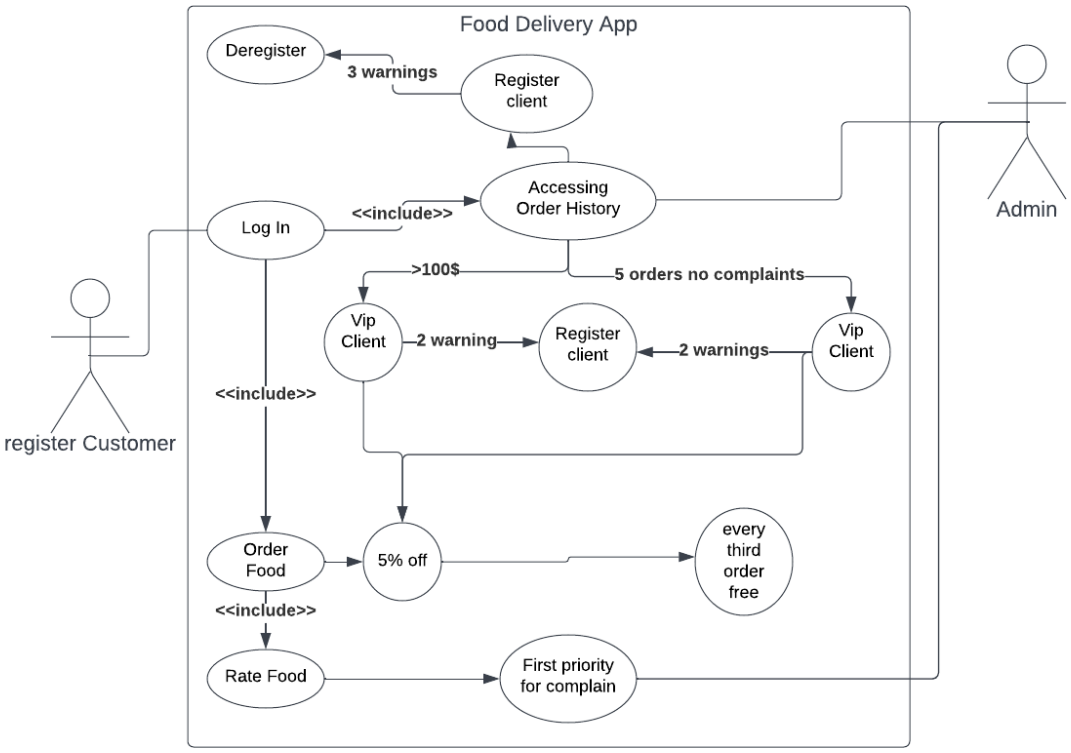
2.1.1 Visitor Use Case Diagram


Food Delivery App
Verify email
<<include>>
Sign Up
Display Sign Up error
<<extend>>
<<extend>>
Profile Help
<<extend>>
Visitor
View menus of restaurants
Privacy Info
Admin
View ratings of restaurants

2.1.2 Customer Use Case Diagram



2.1.3 Register Customer Use Case Diagram



2.1.4 Manager Use Case Diagram

2.2 Assumptions and Dependencies

The main dependencies of this project is that Tasty Express will use fabricated information and will depend on a local database for simplicity. A large assumption we make with this project is that food will be delivered immediately after an order is made to give us a better demo for the application.

The project will be coded in Python3 and may use tkinter for Graphical User Interface and panda's for data processing.

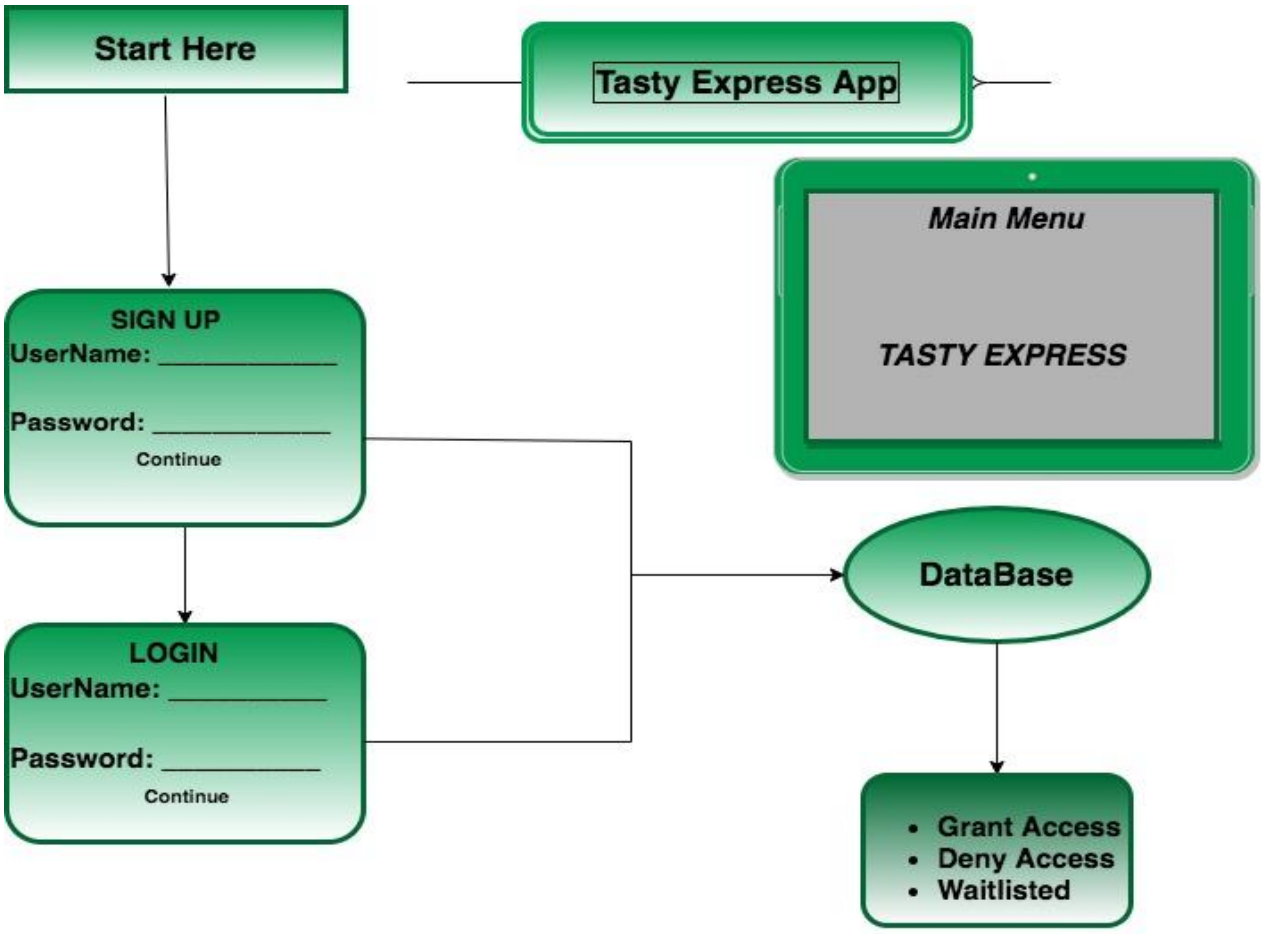
3. Specific Requirements

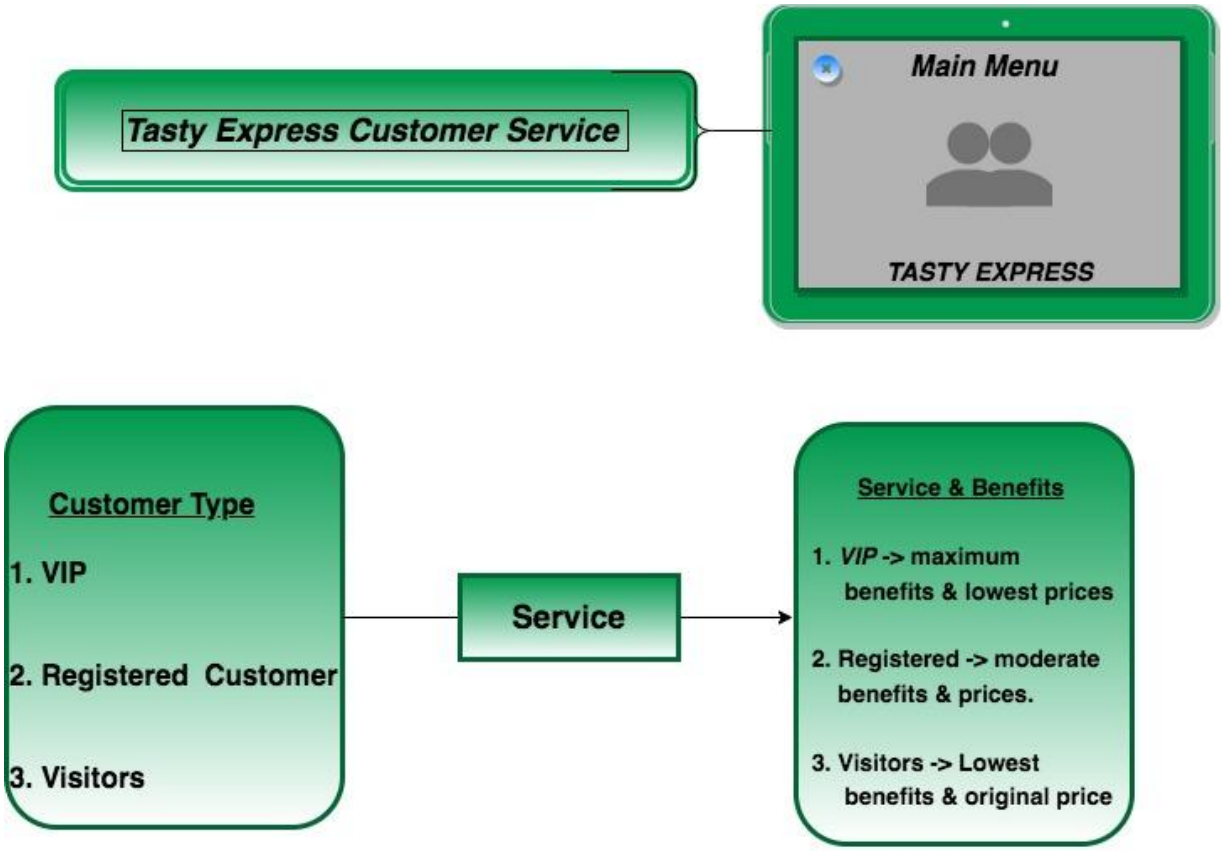
The specific requirement for this project is that customers will be able to access the Tasty Express applications and experience the process of ordering food from a variety of selections. Present within the application is going to be the 5 important users which are the customer, manager, delivery person, and chief. The customer will have 3 tiers which would be the visitors, registered customers, and finally the VIPs. The different tier customers will have their own set of benefits, which customers can decide their tiers at any time. Next on the list are the managers. The manager will ensure that things are running smoothly and efficiently as well as handling complaints from customers and users. Not only that but the manager would be tasked with choosing the chiefs and delivery person, in addition to deciding their salary. The delivery person would be tasked with delivering the food, while the cook/chief will be tasked with creating the meals. Additionally, the project would be built so that it can be easily accessed by users and customers. Ways in which this can be achieved is by providing an easily memorable URL link that will head straight to the application. Not only that but having a login and sign-up page will keep the ordering process simple and organized for both the users and customers.

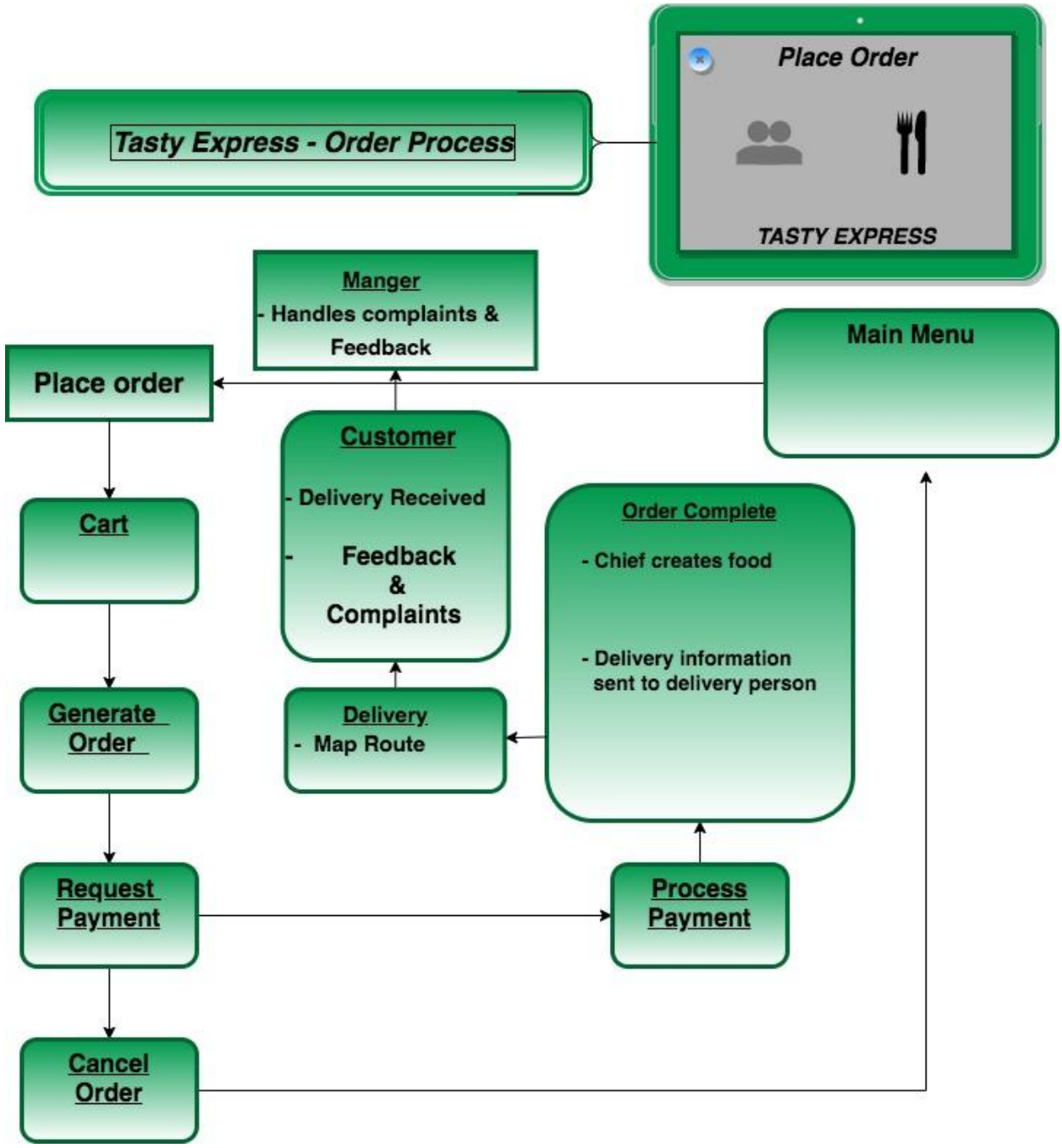
3.1 Use-Case Reports

We define the use cases primarily as different ways users interact with this application. Users have four defined ways to interact with the program and the application has proper action for all these user types respectively. It's also important to mention that each type of user needs separate program interfaces because different users can trigger different types of actions and need a response from the application accordingly. The main focus here is to have a seamless integration of user experience and each stage the customer will go through while using this application, as it's deemed a major feature of this application, hence in section four we have posted a mock visualization of each phase the customer will go through while interacting with the application interface. For the rest four types of interaction and user group, we will envision a more detailed outline for rest of the four types of user interfaces on the upcoming drafts, however we briefly touched each of these cases in number 2 with each use case diagram and we will follow up with additional details on upcoming drafts promptly.

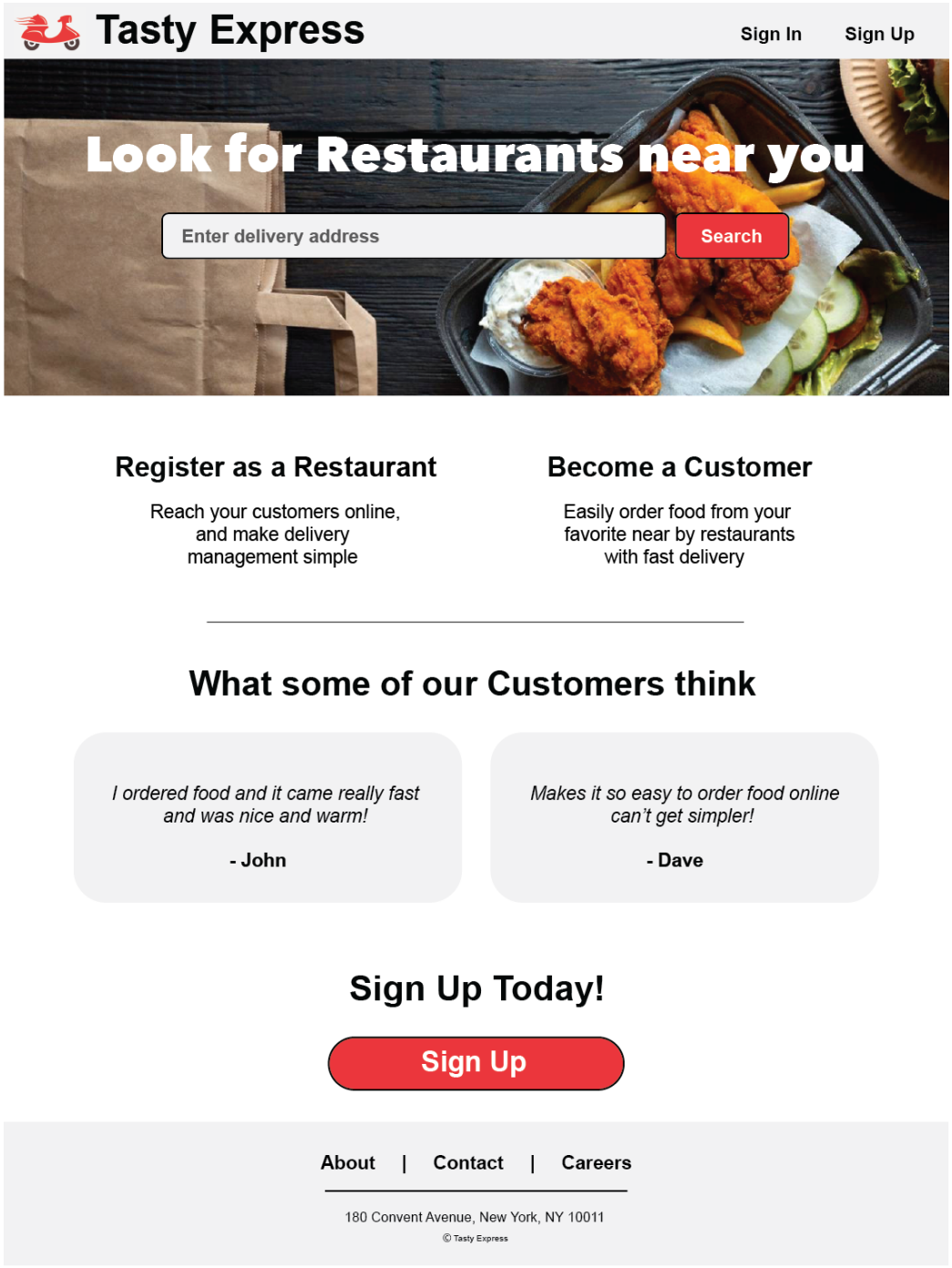
3.2 Supplementary Requirements



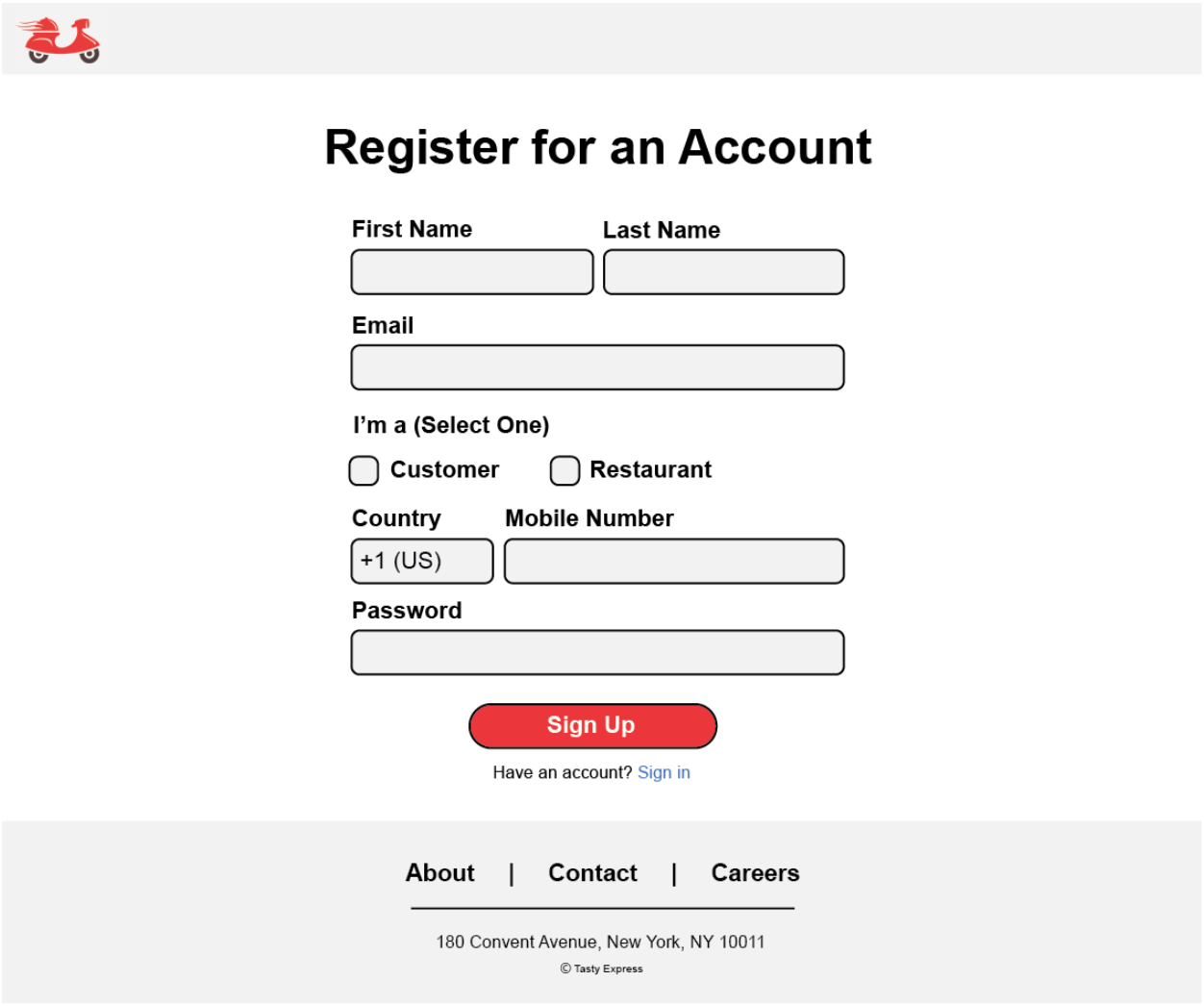

Tasty Express Customer Service
Main Menu
TASTY EXPRESS
Customer Type
1. VIP
2. Registered Customer
3. Visitors
Service
Service & Benefits
1. VIP -> maximum benefits & lowest prices
2. Registered -> moderate benefits & prices.
3. Visitors -> Lowest benefits & original price


Tasty Express - Order Process
Place Order
TASTY EXPRESS
Manger
- Handles complaints & Feedback
Main Menu
Place order
Customer
- Delivery Received
- Feedback & Complaints
Cart
Order Complete
- Chief creates food
- Delivery information sent to delivery person
Generate Order
Delivery
- Map Route
Request Payment
Process Payment
Cancel Order

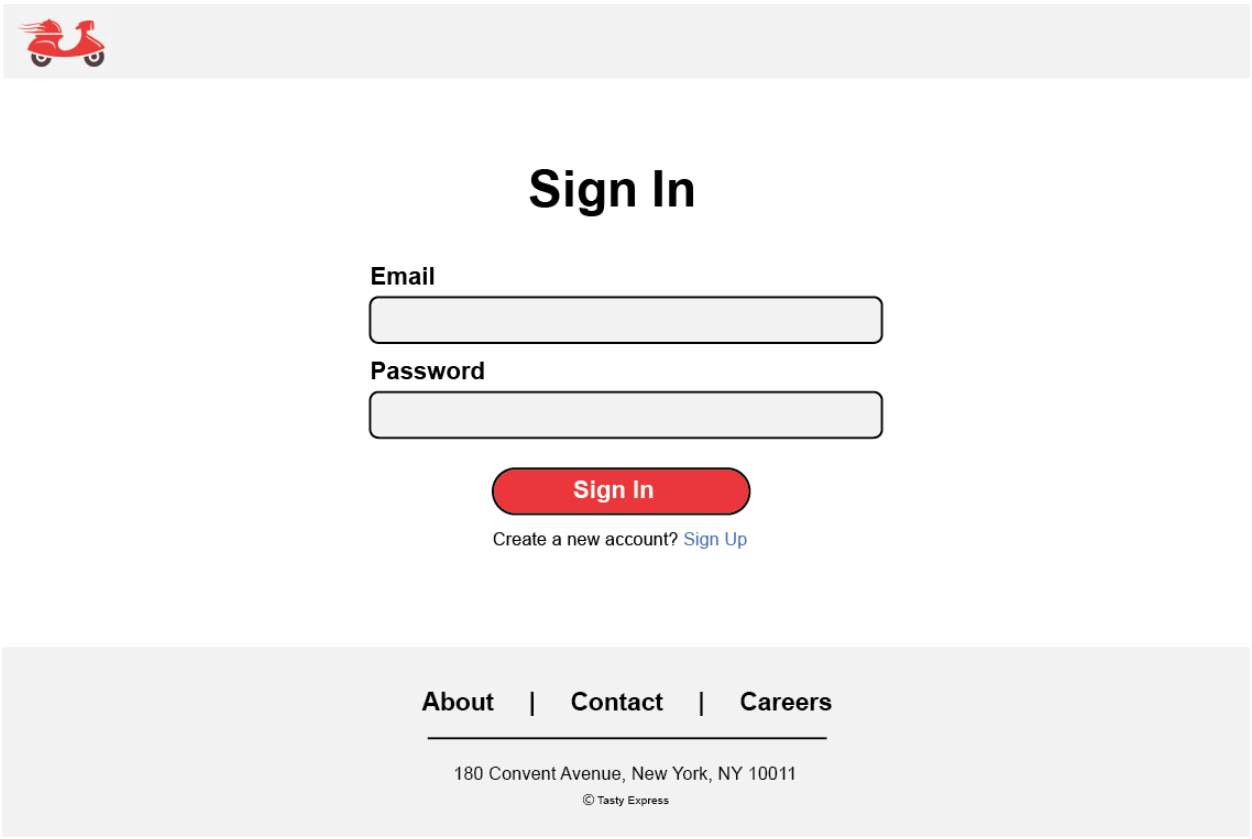
4. Supporting Information



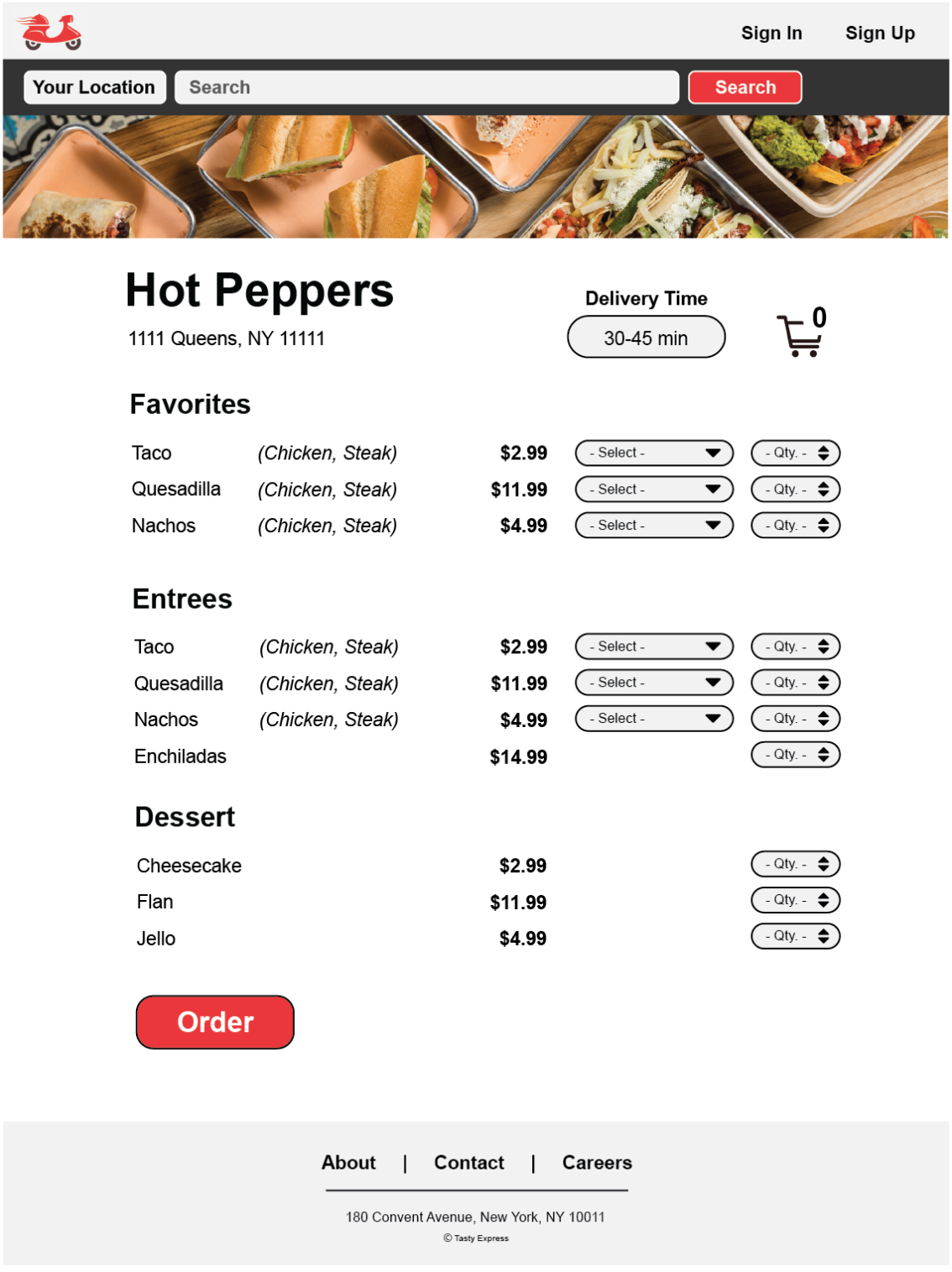
This is the Home Page of Tasty Express



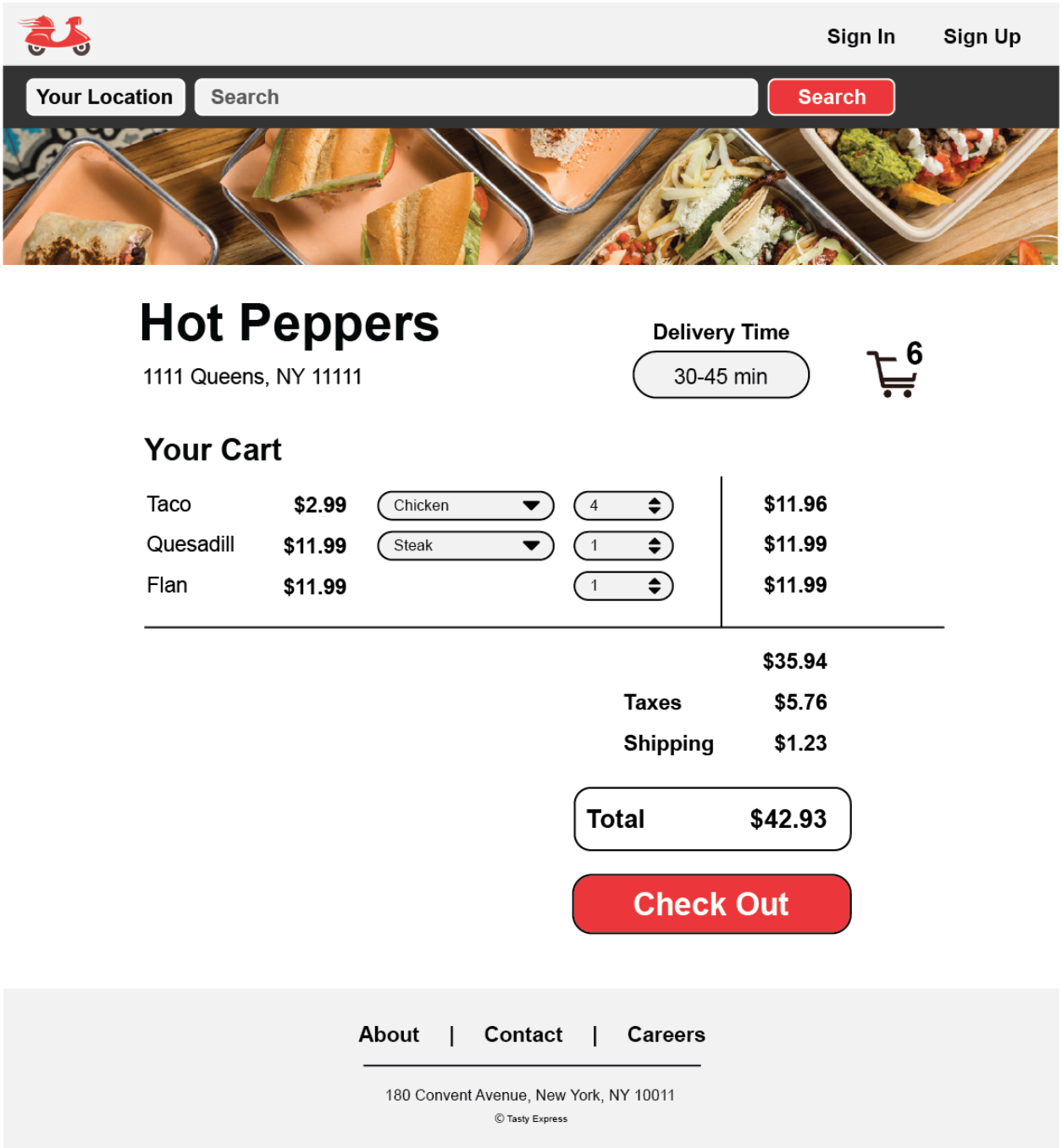
This is the Register for an Account page of Tasty Express



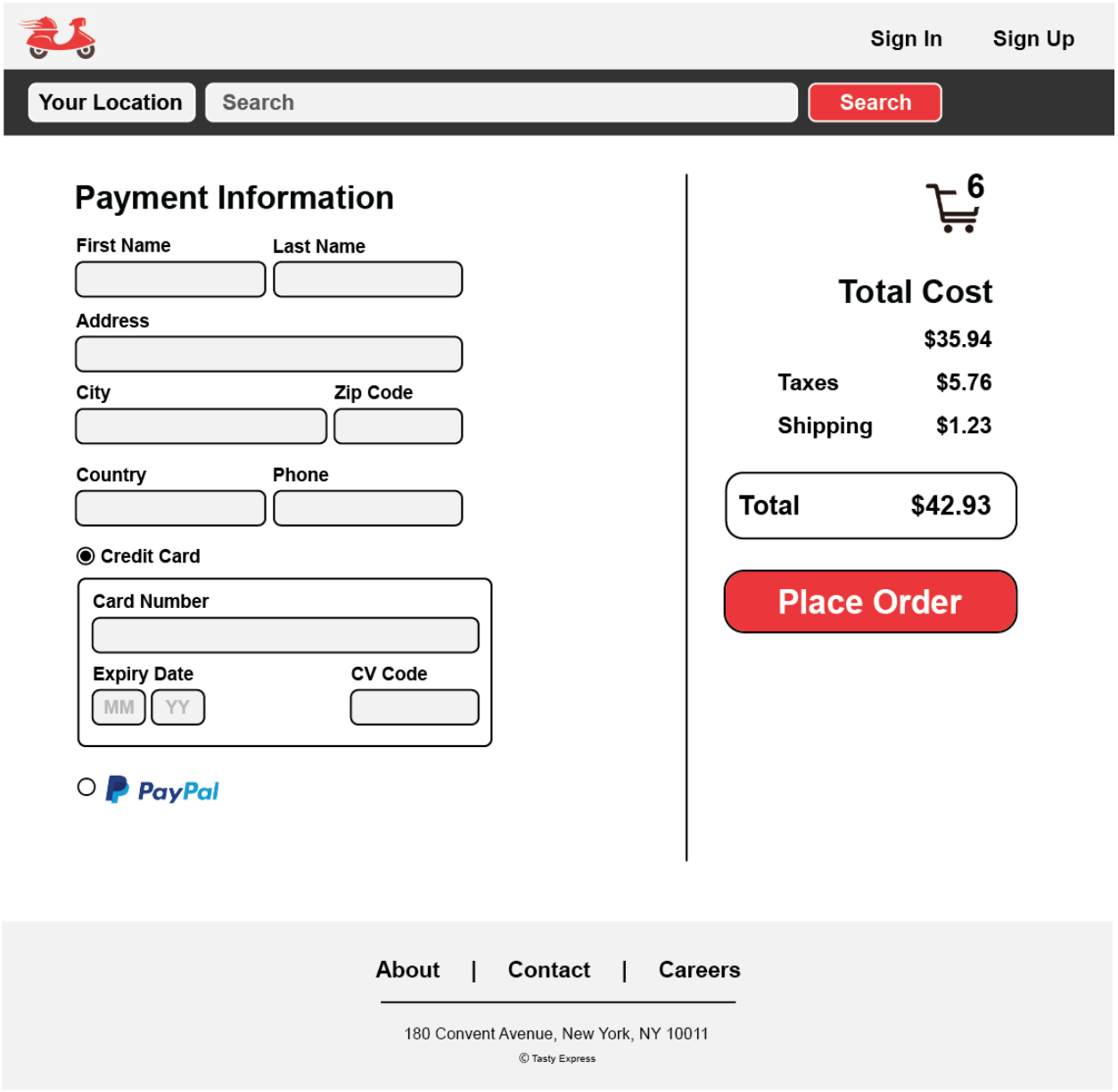
This is the Sign In Page of Tasty Express



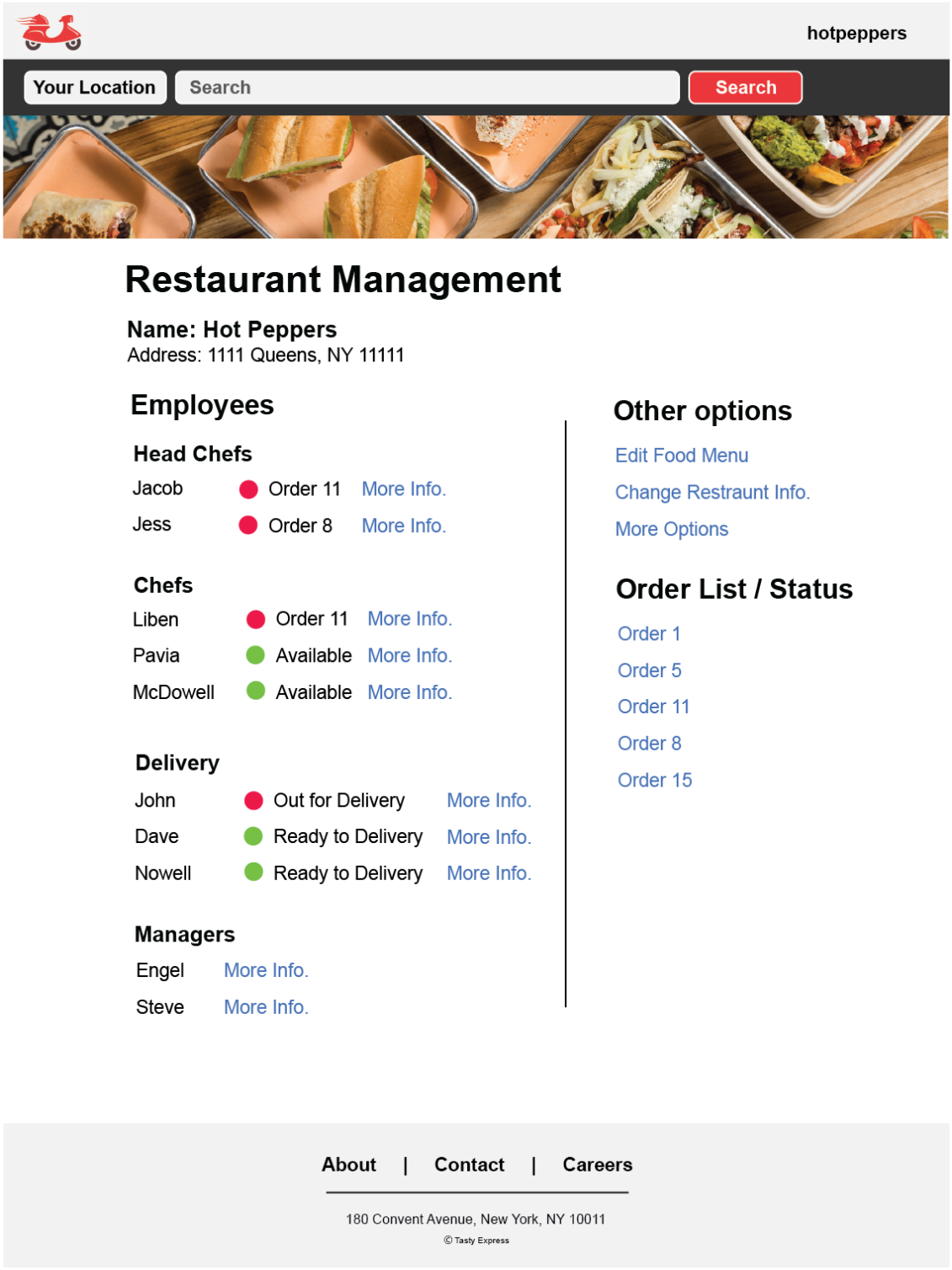
This is the order food Page of Tasty Express



This is the Check Out Page of Tasty Express



This is the Payment Information Page of Tasty Express (Final step to place the order)



This is the Management Page for a Restaurant of Tasty Express (Final step to place the order)