BookingApp

Software Requirements Specification Document

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Revision History

Name	Date	Version	Rationale
Carlos Gil	02/28/2018	0.10	Initial draft
Kevin Shea	03/15/2018	0.11	Updated and edited draft
Spencer Escalante	3/18/2018	0.12	Updated and edited draft
Scott Hind	3/21/2018	0.13	Updated and edited draft
Madelynn Steinbiss	3/22/2018	0.14	Updated and edited draft
Kevin Shea	3/24/2018	1.0	Finalized and submitted

1. Preface

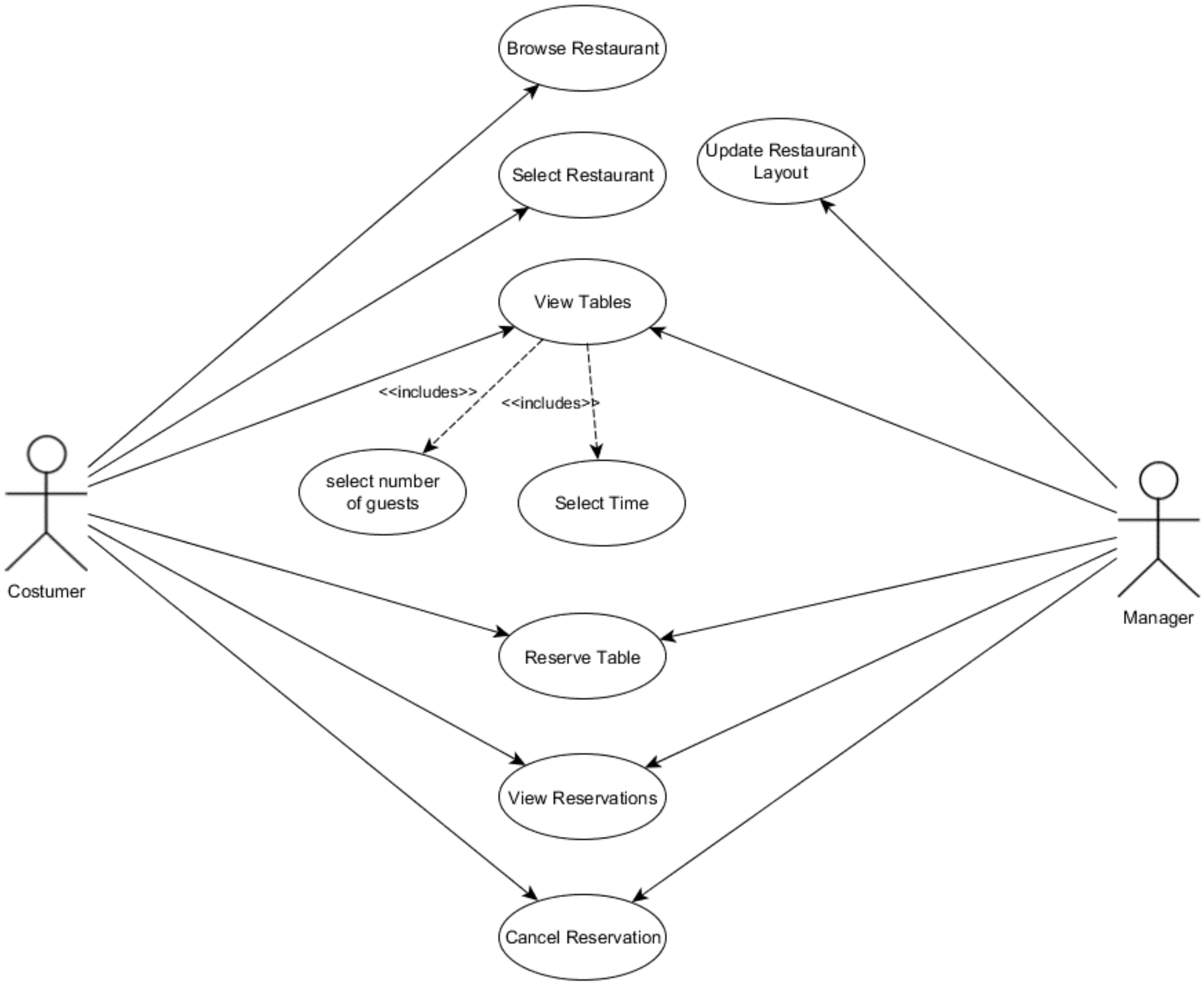
The purpose of this document is to present a detailed description of the BookingApp software. It will explain the purpose, features and interfaces of the software, what the software will do and the constraints under which it must operate. The intended audiences for this document are the users and developers of the software.

Fundamentally, we chose this project since we couldn't find an equivalent application anywhere. Many patrons have a "favorite table", hate/love tables and/or booths, etc. A dining experience could be much more enjoyable if those preferences are met. Furthermore, a proprietor, given access to patrons' preferences, may be able to make smarter decisions as to seating and thus driving up seatings.

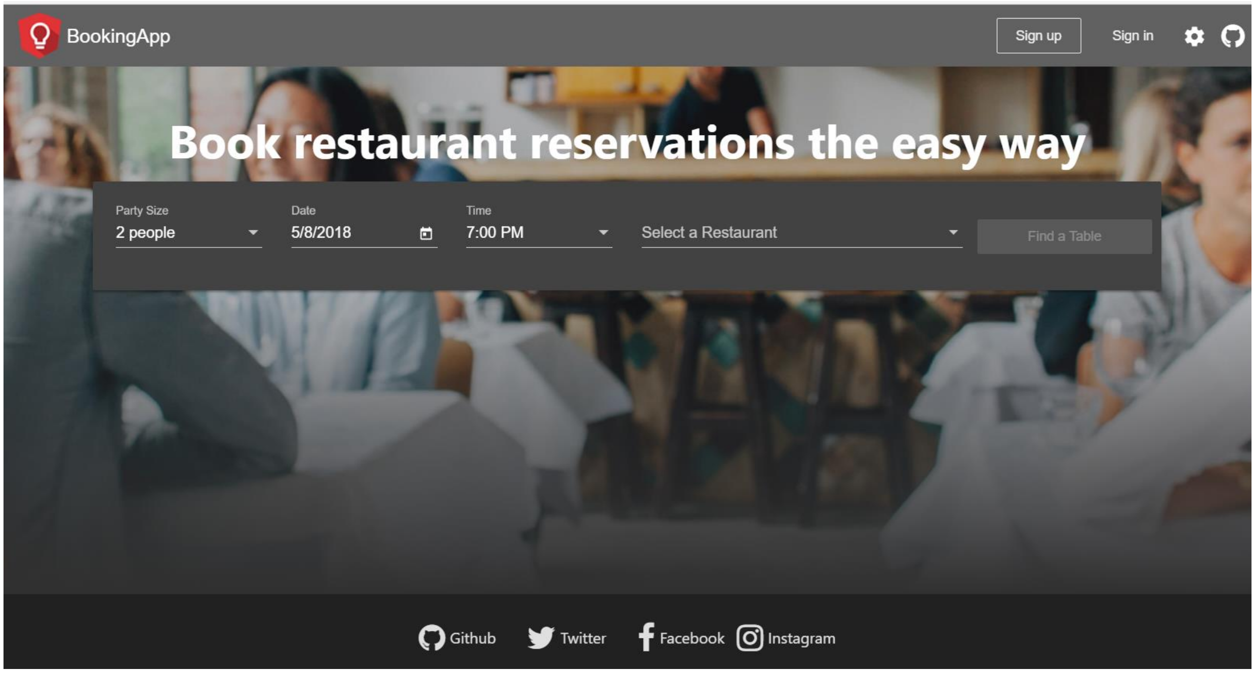
2. Introduction

BookingApp is a web-based application that is composed of a frontend component and a backend component. The frontend component consists of two subcomponents that interact with the Firebase backend. Firebase is a mobile and web application development platform owned and supported by Google. The first, used by diners that wish to reserve a table at a desired restaurant and the second, used by restaurants to manage their reservations and analytics/statistics. BookingApp separates itself from other table reservation software already on the market by displaying a floor plan of the restaurant and allowing users to select a specific table that they wish to reserve by its location or style.

BookingApp will integrate with a few well-known systems to enhance usability and familiarity. Yelp will be incorporated into the restaurant selection process, allowing users to assess reviews before booking their reservation. For authentication services, Google, Twitter, and Facebook will be provided for users to sign in with their already established accounts.



3. Functional Requirements



Book restaurant reservations the easy way

Party Size: 2 people
Date: 5/8/2018
Time: 7:00 PM
Select a Restaurant

3.1 Restaurant

- **Manager**
    - The system shall prompt the user to sign in immediately
    - The system shall allow the user to:
        - Enter and edit a Restaurant and its attributes, which consists of:
            - The restaurant's name
            - Address
            - Phone number
            - Website
            - Hours of operation
            - Cuisine type
            - Brief description
    - The system should allow the user to:
        - Add and remove a hostess
    - The system may allow the user to:
        - Upload and delete pictures
        - Edit the floor layout
        - See statistics on specific tables
        - Enter menu
        - Enter specials
        - Define dress code
- **Host**
    - The system shall prompt the user to sign in immediately
    - The system shall allow the user to:
        - Reserve a specific table for a time slot for a specific date, under a guest's name with a party size
        - Edit or cancel a reservation
    - The system may allow the user to:

        - Enter the guest’s phone number
        - Link the reservation to a pager

3.2 Statistics

- **Definitions/Notes**
    - The restaurants’ proprietors use the statistics page
- **Display**
    - The system shall display a floor plan of the restaurant to be able to display information about a specific table
    - The system shall display drop down for the user to select different types of reports that do not relate to just one table
- **Available Information**
    - Per Table, Per Table Type, For Whole Restaurant
        - Average cost of meal
        - Average tip
        - Average time sitting
        - Average rating
    - Customers
        - Average age
        - Average number of reservations at this restaurant
    - Waiter
        - Average time spent per guest
        - Average tip
    - Restaurant
        - Busiest time of day
        - Busiest day of week
        - Average party size
        - Amount of reservations a day
        - Amount of canceled reservations a day

- **Output Options**
    - The system shall allow the user to view the reports on the screen
    - The system shall allow the user to print the reports
    - The system shall allow connection with an email server to be able to email the reports
    - The system shall allow certain information to be presented in a graphical representation

3.3 Restaurant Selection

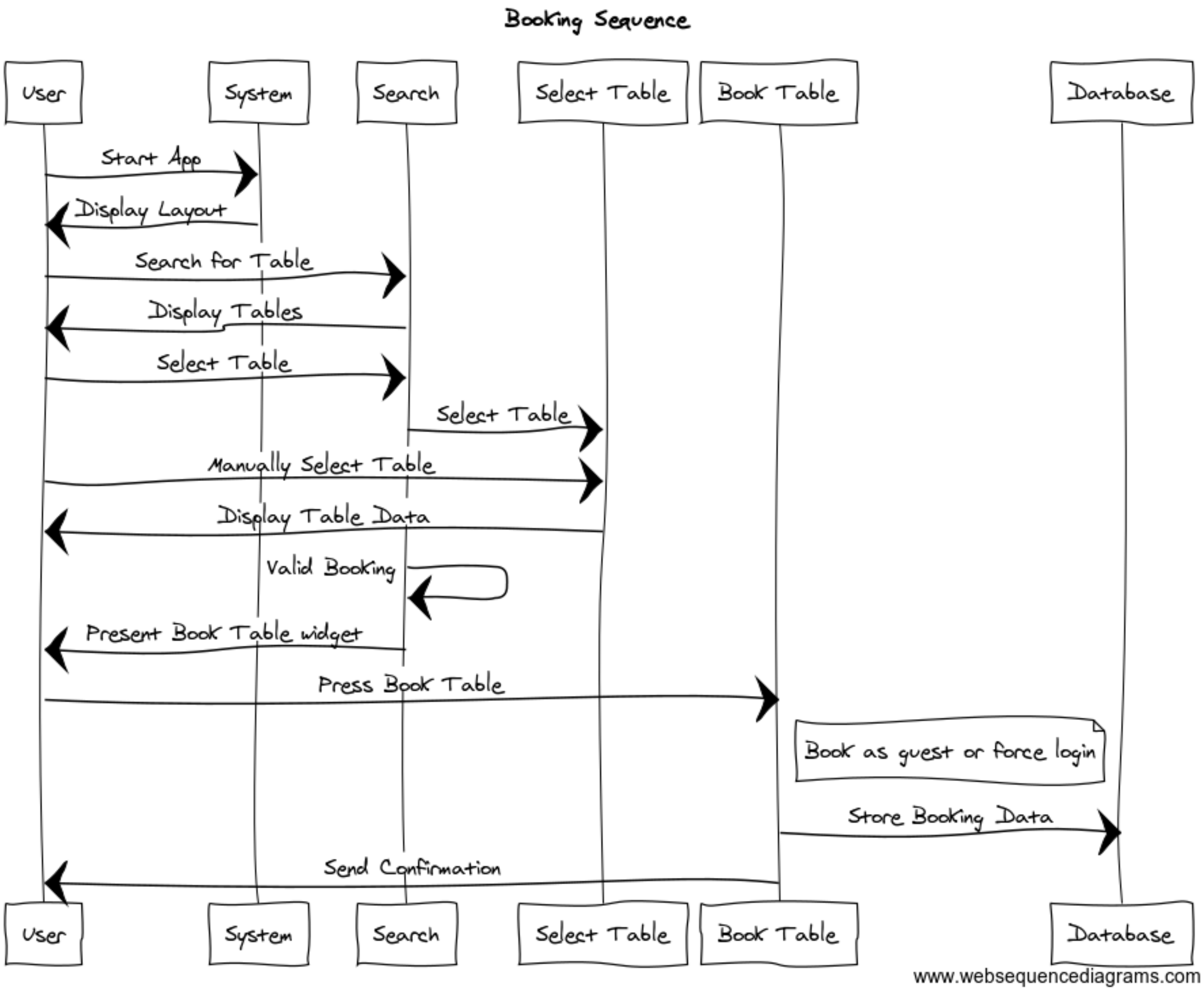
- The application shall allow a user to see the Yelp reviews of a restaurant
- The application shall be able to filter restaurants
    - By the type of cuisine that they serve.
    - By the amount of time a user will have to wait for a table (30-minute wait, 45-minute wait, 15-minute wait, etc.)
    - The application should allow the user to filter by the rating of the restaurant (5 stars, 4 stars, etc.)

- The application shall show the user the wait times of the restaurant that they are currently viewing.
- The application shall show the user the hours of operation of the restaurant that they are looking at.
    - The application shall show the user when the restaurant opens
    - The application shall show the user when the restaurant closes for the day
- The application shall show the user the type of restaurant (buffet, fine dining, diner, etc.) that they are looking at.
- The application shall show the user how expensive the restaurant that they are looking at is.
- The application should show the user all supported restaurants near their current location given a selected distance
    - The application should allow the user to enter their zip code to find restaurants near them
    - The application shall allow the user to enter the name of a town to find restaurants that are in that town
- The application should alert the user if there is a special/seasonal event happening at a restaurant

3.4 Customer

- **Definitions/Notes**
    - A customer is a 3rd party wishing to make a reservation at a supported restaurant
    - As a precondition for these requirements, it is assumed that a customer has already selected a restaurant
- **Display**
    - The system shall display the floor plan of the restaurant to the user
    - The system shall allow the user to manually select any table
    - The system shall perform “Table Selection” requirements
- **Search capability**
    - The system shall allow the user to search for an available table in the restaurant
    - The system shall require the user to enter the number of diners
    - The system shall allow the user to search via any of the following:
        - Time
        - Type of table
    - The user shall be presented a list of tables that fit their criteria
    - The user may select a single table at a time
    - The system shall perform “Table Selection” requirements
- **Table Selection**
    - The system shall display table specific data
    - The system shall display available booking times
        - If these requirements are executed because of a search that specified the time, that time shall be preselected
    - The user may select any available time and specify any party size

        - If these requirements are executed because of a search that specified the party size, that party size shall be preset
    - If the user has a valid time selected and meets minimum and maximum party size for that table, the “Book Table” control shall be made available
- **Book Table**
    - The system shall prompt the user to sign in before the final reservation is booked and confirmed
    - These requirements are executed as the result of a customer pressing the “Book Table” control
    - If the customer is not currently logged in, they are given two options: Login/Create Account; Book as Guest
        - Once those appropriate requirements have been executed, the user system shall continue here
    - A confirmation UI with appropriate information is presented to the user
    - If the user confirms the transaction
        - The reservation data is updated in the database
        - An email is sent to the customer confirming the reservation



3.5 Software Interfaces

The system requires the use of a modern web browser for using BookingApp. For best results and performance the following browser versions are recommend:

- Google Chrome – version 56.0 and later
- Mozilla Firefox – version 52.0 and later
- Apple Safari – version 10.0 and later
- Microsoft Edge – version 40.0 and later

4. Nonfunctional Requirements

4.1 Performance

Availability

- The system shall be available all the time given stable internet access.

Reliability

- It should not crash or hang, unless as the result of the operating system.

- Once a reservation is confirmed, it shall not be lost.

Response Time

- The application shall get a response from the server in less than 1 second, after the user has made a reservation, given a stable internet connection.

Capacity

- 100 daily users during development phase.

User-interface

- The user-interface, from both the customer user and restaurant user, shall respond in less than 2 seconds.

Accessibility

- The application will not conform to any Software Accessibility guidelines.

4.2 Maintainability

Code

- The code shall be modular, to allow for future modification or additions.

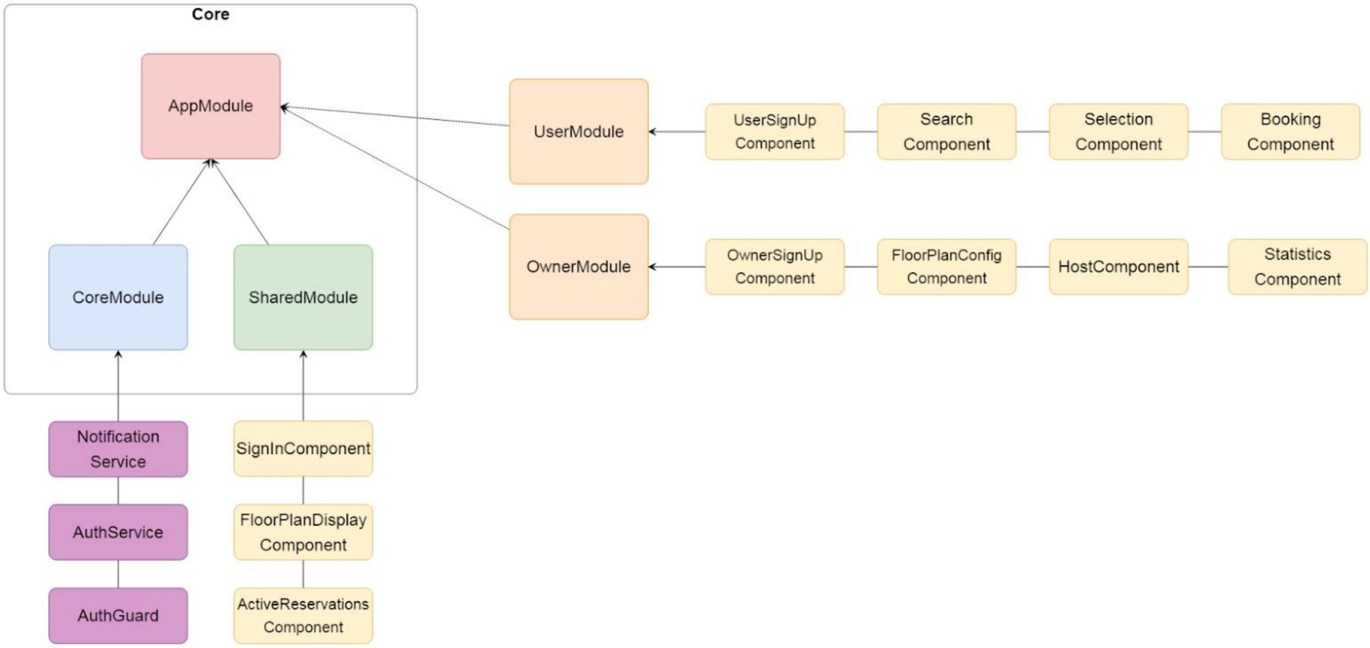
Back Up

- The system shall provide continuous automated data backups.

Errors

- The system shall store logs of all the errors.

5. System Architecture



6. System Evolution

The BookingApp in its first iteration will predominantly consist of managing and booking reservations for both the diners and restaurant proprietors. The following are future improvements or added features:

- A tool that allows the proprietor to easily build and edit the floor plan by dragging and dropping styles of tables to define their custom layout.
- An online waitlist for restaurants that don't allow reservations so that diners can join that waitlist online and wait on their own time
- Online payments so that diners can pay for their meal through the website
- A favorites list for the diners most frequently reserved restaurants
- Other restaurant suggestions based on previously booked reservations

7. Glossary

Angular - a Typescript-based front-end web application platform developed at Google.

Firebase - a back-end mobile and web application platform developed at Google.

Node.js - a cross-platform JavaScript runtime environment for servers and applications.

8. References

https://angular.io
https://firebase.google.com
https://nodejs.org/en/