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Side Quest
System Requirements Document

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Introduction BW

The purpose of the system requirements documentation is to provide an overview of the vital classes and methods that will comprise the application, as well as the interplay between those elements. One of the core goals of this document is to define the functional requirements that will provide value to all stakeholders.

The document contains numerous visualizations to better contextualize the functionality of the application, such as a Class Diagram, Use Case Diagram, Use Case Scenarios and System Sequence charts. The class diagram is generated to give shape to the system and to connect its components. The Use case diagram provides examples of the methods used to meet the requirements. The Use Case scenarios take a speculative approach to defining Stakeholder engagement with the system. Finally, system sequence diagrams are constructed to map the exchange of data and actions required to perform all the necessary tasks.

Description Model BW

The System requires input data primarily from Google Maps as it will serve as the backbone of the Application, all other data will effectively be used to generate an overlay and custom functionality for the existing infrastructure. Side Quest will also require device location data as well as information typical of a standard user account on a social media platform, including attributes such as full name, email address, promotional contact preferences, phone number and date of birth. Date of Birth information will be used to filter activities that might be age restricted such as promotional events at bars. Side Quest will also prompt the user upon successful account creation to link other social media profiles such as Facebook and Instagram accounts. If the user opts in to linking said accounts and authenticate their identity successfully, they have the ability to forward invitations through meta's messaging systems like Instagram Direct Messages or Facebook Messenger. The phone number account attribute is used as an alternative means of validating user identity when attempting to log in.

The business level profiles in the application will require a different set of data to create a profile, such as address, hours of operation, type of business. The application also requires the business to present a form of identification (such as a scan of the proprietor's drivers license or a business tax code)to verify authenticity. In an effort to improve visibility on the app, the business is also asked to provide keywords or tags to associate with their profile in order to make them more accessible to the consumer side of the user base.

Given all the above data, Side Quest will generate a road map interface which includes graphical widgets that represent points of interest, businesses, users (dependent on location

sharing permissions). engaging with a business widget or point of interest will open an expanded view on the map (if the user is stationary) which includes details about the object such as hours of operation, reviews and average time expenditure.

In regards to performance and security, Once a route is set in Side quest a local copy of the route details is cached on the user's device, this is done in an effort to combat spotty service negatively affecting navigation. Security is managed via username and password authentication coupled with togglable user location permissions, keeping user's data and privacy under control.

Input:

- Client location data: Approximate location of the user in relation to the models delivered by the devices built in GPS

- Client profile data: Clients' personally identifying information will be used to filter events that are deemed inappropriate for the age bracket of the client. The user data also allows for interaction between profiles like sharing preferences that determine whether or not they appear on public/private event guest lists.

Components of client profile data:

- Client location highlighting preferences
- Client invitation and social preferences
- Username
- Legal first name
- Legal last name
- Phone Number
- Email Address

- Client (business) data: Business level clients require distinct information that sets them apart from standard users.

- Hours of operation
- Price bracket
- Defining tags for type of business
- Business reviews
- Legal First Name
- Legal Last Name

- Point of interest location

- Approximate time expenditure : This information will be aggregated and averaged from user engagement with a given point of interest. New points of interest will have an approximate time expenditure of null that will not be visible to the end user.

- Point of interest reviews

Output:

- Location / business / point of interest distance relative to user

- Clickable point of interest widget that expands to include information defined by the broader user population, IE:

    1. rating for a hiking trail
    2. reviews
    3. average time expenditure at the point of interest.

- Draggable road map interface

- Route between two locations entered by the end user.

- Clickable business user profile that expands to display profile information.

- Point of interest widget dynamically rendered within a user defined geographic proximity.

Processes:

-Measure coordinates of destination relative to user location

    -Produce series of viable paths

    -Organize paths by most efficient vs scenic (include points of interest)

-Generate event

    -Generate invitations for said event to list of users associated with the event creator.

    -Define event description-readjust mapping line based on user input

    -Factor added time into total

-Display business user profile widget based on map coordinates

Performance:

- Local copy of map with route cached to prevent lag time reloading if cell service lapses.

- Device will not go into sleep mode while a route is in progress

- Events will be prioritized last when rendering map to ensure clear instructions are given even on less performant devices

Security:

-Authenticating username and password on login.

-Not running transactions through the app, therefore no need to store payment information.

-Selective location sharing based on user preferences: Location must be shared to generate routes but inter profile location sharing such as appearing publicly on event guest lists or as points of interest may be toggled on and off at the user's discretion.

-Multifactor authentication used for login validation as well as account recovery

Class Diagram

Separate File

Use Case Diagram

Separate File

Use Case Scenarios

Separate File

System Sequence Charts

Separate File