Version 2.0

Revision Document History

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# Project Vision

The **Pick Quick List** app is designed to make grocery shopping easier and faster for users. The app lets users create, edit, and delete items from their list with a few taps on their smartphone. Users can also sort items into different sections based on the type of product, such as fruit, vegetables, meat, frozen, deli and bakery. This way, users can have a clear and organized view of their list and avoid wandering around the store.

The Pick Quick List app is the ultimate solution for users who want to simplify their grocery shopping experience and have more control over their budget.

# Major Features

The following are the main features and functionalities of the **Pick Quick List app**:

• **User Authentication**: Enable users to log in and register accounts.

• **Grocery Item Management**: Allow users to add, edit, and delete items based on their categories.

• **Category Organization**: Implement a categorization system for items such as fruit, vegetables, meat, frozen, deli, and bakery.

• **Cloud Storage**: Store the grocery lists in the cloud for accessibility across devices.

• **Sharing Functionality**: Enable users to share their grocery lists to other via email and SMS.

• **Real-time updates**: Offer visible notifications to users whenever they add, edit, or delete items, ensuring enhanced user awareness and interaction with the system.

# Risk and Assumptions

## Assumptions

The following are the main assumptions and prerequisites for the **Pick Quick List app**:

• **Users have reliable internet access for cloud synchronization**: The app requires users to have a stable and fast internet connection to store and retrieve their grocery lists from the cloud. Users who do not have internet access will not be able to use the app or access their lists.

• **Users are familiar with basic smartphone functionalities for seamless app usage**: The app assumes that users know how to use their smartphone’s keyboard, and touchscreen. Users who are not comfortable with these functionalities may have difficulty using the app or may need additional guidance. The app also assumes that users have a compatible smartphone that can run the app smoothly and support its features.

## Business & Technical Risk

The following are the main business and technical risks for **the Pick Quick List app:**

• **Business Risk**: Potential competition from similar apps in the market. The app faces the challenge of differentiating itself from other grocery list apps that offer similar features and functionalities. The app needs to have a unique value proposition and a strong marketing strategy to attract and retain users. The app also needs to consider the user feedback and preferences to improve its user experience and satisfaction. The app should conduct a thorough market research and analysis to identify its target audience, competitors, and opportunities.

• **Technical Risk**: Ensuring secure and efficient cloud storage and synchronization. The app relies on cloud storage and synchronization to provide its features and functionalities. The app needs to ensure that the cloud storage is secure and reliable, and that the data is protected from unauthorized access, loss, or corruption. The app also needs to ensure that the synchronization is fast and accurate, and that the data is consistent across devices. The app should use a reputable and robust cloud platform (Firebase) and implement proper encryption and authentication mechanisms. The app should also test and monitor its performance and scalability to handle high volumes of data and users.

# Stakeholder and User Descriptions

## Market Demographics

**• Target Audience**: Individuals who want a convenient solution for managing their grocery lists. The app is suitable for anyone who shops for groceries regularly and wants to save time and money. The app is especially beneficial for busy professionals, families, students, and seniors who need a simple and easy way to plan and organize their shopping. The app appeals to users who value convenience, efficiency, and personalization in their mobile apps.

**• Market Size**: Estimate potential users based on the increasing reliance on mobile apps for daily tasks. The app can tap into the growing market of mobile app users who use their smartphones for various purposes such as communication, entertainment, education, and productivity. According to a report by Statista, the number of mobile app users worldwide is expected to reach 7.1 billion by 2024.

The app can also target the specific segment of grocery shoppers who use mobile apps to assist them with their shopping. According to a survey by Nielsen, 23% of global respondents said they used a mobile app to order groceries online, and 20% said they used a mobile app to create a shopping list. The app can leverage these trends and offer a unique and innovative solution for grocery list management.

## Stakeholder Summary

|  |  |  |
| --- | --- | --- |
| **Name** | **Represents** | **Team Assignment** |
| User | App User | **•** Provide feedback on user experience.  **•** Engage with the app to manage grocery lists.  **•** Utilize features such as sharing and categorization. |

## Roles and Responsibilities

### Role(s)

|  |  |  |
| --- | --- | --- |
| Role Name | Description | Responsibilities |
| Users | The end-users of the Pick Quick List app. | • Provide necessary information for account creation.  • Log in securely using authentication credentials.  • Add items to the grocery list based on categories.  • Modify and update items on the list as needed.  • Remove unnecessary items from the list.  • Collaborate with others by sharing grocery lists.  • Use sharing functionality to send lists via email and SMS.  • Securely end the session to protect user data and privacy. |
| Developers | The development team of the Pick Quick List app. | • Develop a secure system for user logins and registrations.  • Implement features for adding, editing, and deleting items.  • Design and implement a categorization system for organizing grocery items.  • Develop and maintain secure cloud storage for storing grocery lists.  • Implement features allowing users to share grocery lists.  • Implement real-time notifications for user actions on the app.  • Ensure the app provides a responsive and seamless user experience.  • Implement secure user authentication and data protection mechanisms.  • Design a user-friendly and intuitive interface.  • Identify and address technical and business risks associated with the app. |

# Requirements

## Functional Requirements

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Priority | As a | I want to | So that I can | Relative Estimate | Sprint | References |
| High | User | Log in | Securely access my lists | 5 | 1 | Authentication |
| High | User | Register | Create a personalized account | 5 | 1 | Registration |
| High | User | Add items | Build my grocery list | 4 | 2 | Management |
| Medium | User | Edit items | Modify and update list | 5 | 2 | Management |
| Medium | User | Delete items | Remove unnecessary items | 4 | 2 | Management |
| Medium | User | Share list via email | Collaborate with others | 3 | 3 | Sharing |
| Medium | User | Share list via SMS | Collaborate with others | 3 | 3 | Sharing |
| Low | User | Log out | Securely end my session | 2 | 1 | Authentication |

## Non Functional Requirements

|  |
| --- |
| Non-Functional Requirements |
| Performance: The app should provide a responsive and seamless user experience. |
| Scalability: The app should handle an increasing number of users and grocery items efficiently. |
| Security: Implement secure user authentication and protect user data. |
| Usability: The app should provide a user-friendly and intuitive interface. |

## Cost and Pricing

The following are the cost and pricing constraints relevant to the app’s development and maintenance:

**• Cost Constraint:** The development budget is limited to $25,000. This amount covers the expenses for hiring developers, designers, testers, and marketers, as well as purchasing software licenses, hardware, and cloud services. The app should be developed within this budget and delivered on time and with quality.

**• Maintenance Budget:** Allocate $2,000 annually for ongoing maintenance. This amount covers the costs for updating, debugging, and enhancing the app, as well as providing customer support and feedback. The app should be maintained regularly and efficiently to ensure its functionality and performance.

## Pricing Assumptions

The following are the assumptions used for cost estimation:

**• Assumption 1: Development time estimation assumes a team of five developers working for six months.** The developers are expected to have the skills and experience in developing mobile apps for both Android and iOS platforms, using technologies such as Firebase, Flutter, and Dart. The developers are also expected to follow the agile methodology and use tools such as GitHub, Jira, and Slack for collaboration and project management. The developers are paid an average of $40 per hour, which amounts to $32,000 for the entire development period.

• **Assumption 2: Maintenance costs are based on an estimated 10 hours of work per month.** The maintenance work includes fixing bugs, adding new features, improving user interface, and responding to user feedback. The maintenance work is done by one of the developers who is paid $40 per hour, which amounts to $4,800 per year. The remaining $200 per year is reserved for cloud service fees and other miscellaneous expense.

## Licensing and Installation

The following are the licensing requirements and installation considerations for the Pick Quick List app:

**• Licensing:** The app will be distributed under the **MIT** license. This license allows users to use, copy, modify, and distribute the app for free, as long as they include the original license and the app’s source code. The license also disclaims any warranties and liabilities for the app. The app’s license can be found in the app’s settings and on the app’s website.

**• Installation:** The app will be available for download on iOS and Android app stores. The app requires a minimum of iOS 13 or Android 10 to run smoothly and support its features. The app also requires a minimum of 25 MB of storage space on the device. The app can be installed by following the instructions on the app store page or on the app’s website.

## Alternatives and Competition

The following are the main competitors of the Pick Quick List app and their strengths and weaknesses:

**• Competitor 1: Out of Milk.** This app is one of the most popular grocery list apps in the market, with over 10 million downloads and 4.5 stars rating on both iOS and Android app stores. The app allows users to create, edit, and share grocery lists, as well as scan barcodes, track pantry inventory, and access coupons and deals. The app has a user-friendly interface and a large user community. However, the app has limited cloud functionality, as it only syncs the lists with the user’s email account. The app also has a higher subscription cost, as it charges $1.99 per month or $19.99 per year for premium features such as unlimited lists, themes, and widgets.

• **Competitor 2: AnyList.** This app is another popular grocery list app in the market, with over 5 million downloads and 4.8 stars rating on both iOS and Android app stores. The app allows users to create, edit, and share grocery lists, as well as import recipes, add photos, and create meal plans. The app has a robust cloud synchronization feature, as it syncs the lists across multiple devices and platforms. The app also has an affordable pricing, as it offers a free version with basic features and a paid version with advanced features for $9.99 per year. However, the app has a smaller user community, as it is less known and marketed than Out of Milk. The app also has fewer features, as it does not support barcode scanning, pantry inventory, or coupons and deals.

# Risk Analysis

The following are the main risks and their descriptions for the **Pick Quick List app:**

• **Risk 1: Technical challenges in implementing secure cloud storage:** The app relies on cloud storage to store and synchronize the user’s grocery lists across devices. The app needs to ensure that the cloud storage is secure, reliable, and scalable, and that the user’s data is protected from unauthorized access, loss, or corruption. The app also needs to comply with the relevant data protection and privacy laws and regulations. The app may face technical difficulties or delays in implementing these features and functionalities, which may affect the app’s performance and user satisfaction.

**• Risk 2: User adoption may be slower than anticipated**: The app aims to provide a convenient and efficient solution for managing grocery lists. The app expects to attract and retain users who value convenience, efficiency, and personalization in their mobile apps. However, the app may face challenges in reaching and engaging its target audience, especially if the users are not aware of the app’s benefits or are reluctant to switch from their existing habits or apps. The app may also face negative feedback or reviews from users who are dissatisfied with the app’s features or functionalities. The app may need to invest more time and resources in marketing and promotion, as well as user testing and evaluation, to increase its user adoption and retention rate.

**• Risk 3: Competition from existing popular grocery list apps.** The app faces competition from other grocery list apps that offer similar features and functionalities, such as AnyList and Out of Milk. The app needs to differentiate itself from its competitors and offer a unique value proposition to its users. The app may also need to monitor and respond to the changes and innovations in the market and keep up with the user expectations and preferences. The app may lose its competitive edge or market share if it fails to deliver a superior user experience and satisfaction.

**• Risk 4: Changes in mobile operating systems affecting app compatibility**: The app is designed to run on both Android and iOS devices, and to support the latest versions of the operating systems. The app needs to ensure that the app is compatible with the different devices and operating systems, and that the app’s features and functionalities work properly and consistently. The app may encounter issues or errors when the operating systems are updated or changed, which may affect the app’s functionality and performance. The app may need to update or modify its code and design to adapt to the changes and maintain its compatibility.

**• Risk 5: Security vulnerabilities leading to data breaches:** The app collects and stores the user’s personal information, such as email, password, and grocery items. The app needs to implement secure user authentication and data encryption mechanisms to protect the user’s data from unauthorized access, theft, or misuse. The app may be exposed to security threats or attacks from hackers or malicious actors, who may exploit the app’s vulnerabilities and compromise the user’s data. The app may suffer from reputational damage or legal consequences if it experiences a data breach or leak. The app may need to implement security testing and auditing tools and practices to identify and fix the app’s security flaws and prevent data breaches.