To-Do List App

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1 Introduction

1.1 Purpose

The purpose of this document is to describe the requirements for the To-Do list App. The intended audience includes all stakeholders in the potential system. These include the following: developers, users.
Developers should consult this document and its revisions as the only source of requirements for the project. They should not consider any requirements statements, written or verbal as valid until they appear in this document or its revision.

1.2 Scoop

The proposed software product is the To-Do list App. The system, a mobile App typically allows users to create a list of tasks, set priorities, deadlines, and reminders. plays the role of a personal task manager or organizer. where users can list, prioritize, and track their tasks or activities, helping them stay focused, organized, and efficient in managing their responsibilities.

1.3 Definitions, Acronyms and Abbreviations

Mobile App	an application that runs on mobile devices
SRS	Software Requirement Specification
Users	People who will use the app

1.4 References

1. SRS for ECS by priya 2710 on GitHub

2. IEEE Standard 29148

2. Product Overview

2.1 Product Perspective

The app will provide a clean and intuitive user interface, allowing users to effortlessly manage their tasks. Users can easily create, edit, and delete tasks, as well as set reminders and add notes for each task. enabling users to synchronize their tasks and deadlines. enabling users to add tasks via voice commands for enhanced accessibility. supporting various screen sizes, resolutions, and operating systems (iOS and Android).

2.2 User Characteristics

2.2.1 Users

Functionalities of the users:

1. Create, delete, or modify tasks.
2. Create new task lists.
3. Logging into the app by using his email.
4. Modify personal profile information.
5. Modify app settings.
6. Provide feedback for improving the next versions.
7. Customize the app theme.
8. The user can donate to support improving next versions.

2.3 General Constraints

1. The app shall be developed using JavaScript.
2. The app size shall not be more than 50 Mbytes.
3. The app shall start up within 2 seconds.
4. The number of help frames shall not be less than 9.
5. User authentication must be implemented securely, using industry-standard encryption methods for storing sensitive data like login credentials.

2.4 Operating Environment

The To-Do list app shall operate on both iOS and Android devices.

2.5 Assumptions and Dependencies

1. The intended users have problems managing their tasks.
2. Users have problems in staying focused and organized.
3. users will have devices that meet the minimum system requirements for the app to function properly.
4. responsibility for the privacy and security of their login credentials and any personal information stored within the app.
5. users will have access to a stable internet connection to sync tasks and data between devices.
6. The app might depend on third-party services or APIs for features like cloud storage, authentication.

3. specifics Requirements

3.1 External Interfaces Requirements

External Interface Requirements for a To-Do list app typically refer to interactions or interfaces with external systems, services, or users as mentioned below:

3.1.1 User Interface

1. **User Registration/Login:** Interface for users to create accounts or log in securely to access their tasks across devices.
2. **Task Management Interface:** User-friendly interfaces for adding, editing, deleting, organizing, and prioritizing tasks.

3. **Settings and Preferences:** Interface allowing users to customize app settings, notifications, themes, or preferences.

3.1.2 External Services/APIs:

1. **Cloud Storage Integration:** Interface with Google Drive service for task data storage and synchronization across devices.
2. **Authentication Services:** Integration with authentication services (Firebase Auth, OAuth) for secure user authentication and authorization.
3. **Push Notification Services:** Interface with services like FCM (Firebase Cloud Messaging) or APNs (Apple Push Notification Service) to send reminders or updates to users.

3.1.3 Hardware Interface

Device Notifications: Utilizing the hardware's notification systems to display reminders or notifications related to tasks. This involves interfacing with the device's notification API to deliver alerts.

3.2 The minimum Hardware Requirements

1. **Processor/CPU**
- Android: Snapdragon 400 series or higher, or equivalent from other manufacturers.
- iOS: Apple A8 or newer (found in iPhone 6 or newer).
2. **RAM**
- Android: 1.5GB RAM or more.
- iOS: 1GB RAM or more.
3. **Storage**
- Android: Around 30 Mbytes available for the app installation.
- iOS: Around 50Mbytes available for the app installation.
4. **Operating System Version**
- Android: Support for Android 7.0 or newer version.
- iOS: Support for iOS 11 or newer version.

3.3 Functional Requirements

3.3.1 Registration

a new user shall be able to register and create an account to access the app's full functionalities.

3.3.1.1 **User Sign-Up:** The app shall provide a user-friendly registration process allowing new users to sign up and create an account.

3.3.1.2 **Registration Form:** The registration process shall include a form requiring essential details such as username, email address, and password.

3.3.1.3 **Email Verification:** Upon submission of the registration form, the app shall send a verification email to the provided email address for account confirmation.

3.3.1.4 **Error Handling:** The app shall handle scenarios like invalid email formats, existing usernames or email addresses, and password complexity requirements, providing appropriate error messages to users during registration.

3.3.2 Creating New Task Lists

the user shall be able to create separate task lists to organize and manage different categories of tasks.

3.3.2.1 **List Creation Interface:** The app shall provide a feature allowing users to create new task lists to categorize and organize their tasks effectively.

3.3.2.2 **List Naming:** Users shall be able to name newly created task lists to reflect specific categories or purposes.

3.3.3 Adding New Tasks

The user shall be able to add new tasks to specific task lists for effective task management.

3.3.3.1 **Task Details:** Users shall input essential details for new tasks, such as task title, description, due date, priority level, and any additional relevant information.

3.3.3.2 **Assignment to Task Lists:** Users shall have the option to assign newly created tasks to specific task lists or categories they have previously created.

3.3.3.3 The user shall be able to add subtasks to main tasks for better organization and management.

3.3.3.4 The user shall be able to add attachments to tasks

3.3.3.5 The user shall be able to enrich tasks by adding various types of attachments, such as images, voice notes, or files, to provide additional context or reference for completing tasks.

3.3.4 Deleting a Task

The user shall be able to delete tasks that are completed or no longer relevant to maintain a streamlined task list.

3.3.5 Modifying Tasks

The user shall be able to modify existing tasks to update details or make changes as needed.

3.3.5.1 **Task Modification Interface:** The app shall provide a feature allowing users to modify existing tasks within their task lists.

3.3.5.2 **Editable Task Details:** Users shall have the ability to edit various task details such as task title, description, due date, priority level, and any additional information associated with the task.

3.3.6 Setting Alarms and Reminders for Tasks

The user shall be able to set alarms or reminders for important tasks to ensure timely completion.

3.3.6.1 **Reminder Feature:** The app shall provide a feature allowing users to set alarms or reminders for individual tasks within their task lists.

3.3.6.2 **Reminder Options:** Users shall have the option to set reminders with customizable parameters, including date, time, and notification preferences.

3.2.6.3 **Notification Delivery:** The app shall deliver notifications or alarms at the specified time to remind users of impending tasks.

3.3.7 Changing the Language of the App

3.3.7.1 **Language Selection Feature:** The app shall provide an option within its settings or interface that allows users to change the language displayed throughout the app.

3.3.7.2 **Multiple Language Support:** Users shall have access to a list of supported languages, enabling them to select their preferred language from available options.

3.3.7.3 **Real-Time Language Switching:** The app shall support real-time language switching, applying the chosen language instantly across the app without requiring a restart.

3.3.8 Changing the App Theme

3.3.8.1 **Theme Selection Feature:** The app shall offer a feature within its settings or interface allowing users to change the app's theme or visual appearance.

3.3.8.2 **Multiple Theme Options:** Users should have access to a selection of different pre-defined themes or color schemes to choose from, each offering distinct visual styles

3.2.8.3 **Real-Time Theme Switching:** Changing the app's theme shall be applied instantly upon selection, modifying the overall color palette, background, text, and UI elements accordingly.

3.3.9 Syncing User Profile Between Devices using Google Drive

3.3.9.1 **Google Drive Integration:** The app shall integrate with Google Drive's APIs to facilitate the synchronization of user profiles and task data across multiple devices.

3.3.9.2 **User Profile Sync:** User-specific data, including profile settings, preferences, task lists, and associated tasks, shall be synchronized between devices linked to the same Google account.

3.3.10 Getting Notifications Across All Connected Devices

3.3.10.1 **Multi-Device Notification Support:** The app shall enable notifications to be delivered and synchronized across all devices linked to the user's account.

3.3.10.2 **Notification Types:** Notifications shall include reminders for upcoming tasks, task updates, or any other relevant information to keep users informed.

3.3.10.3 **Real-Time Delivery:** Notifications shall be delivered in real-time or near real-time across all connected devices to ensure prompt updates.

3.3.11 Taking Feedback from the User

The user shall be able to provide feedback to the app's developers to share suggestions, report issues, or express satisfaction.

3.3.11.1 **Feedback Channel:** The app shall include a dedicated section or feature allowing users to submit feedback, suggestions, or comments directly within the app.

3.3.11.2 **Feedback Handling:** The app support team shall receive and review the submitted feedback regularly, taking necessary actions based on user input.

3.3.12 User Donation Feature

3.3.12.1 **Donation Integration:** The app shall include a feature or section enabling users to make donations to support the app's development.

3.3.12.2 **Payment Options:** Users should have various payment options available, such as credit/debit cards, digital wallets, or other secure payment gateways, to facilitate donations.

3.4 Non- Functional Requirements

3.4.1 performance

3.4.1.1 Responsiveness

- The app shall respond to user interactions (adding, editing, or deleting tasks) within 0.5 seconds for smooth and instant feedback.
- User interface elements, including task lists and details, shall load within 1 second upon user interaction or app launch.

3.4.1.2 Load Time

- The app shall load on devices with an initial startup time of less than 2 seconds to provide a quick launch experience.
- Task lists containing up to 100 tasks should load within 2 seconds.

3.4.1.3 Offline Capability

- The app should maintain core functionalities, such as adding or editing tasks, in offline mode, with changes synced to the server upon reconnection.
- Tasks previously accessed or modified offline should be available for viewing and editing even without an internet connection.

3.4.2 portability

3.4.2.1 Cross-Platform Compatibility: The app shall be compatible with major operating systems, including Android (version 7.0 and above) and iOS (version 11 and above), ensuring consistent functionality and user experience across platforms.

3.4.2.2 Responsive Design: the app's user interface (UI) and layout should adapt seamlessly to various screen sizes, resolutions, and orientations, maintaining readability and usability on both smartphones and tablets.

3.4.2.3 Offline Functionality

- The app should support offline usage on both Android and iOS devices, allowing users to access and modify tasks without an internet connection.
- Offline functionality should maintain consistency across platforms, ensuring tasks and changes made offline sync correctly upon reconnection.

3.4.3 Usability

3.4.3.1 Intuitive Interface:

- Clear and easily understandable icons, labels, and menus should guide users through various features and functionalities.
- The app's interface should be intuitive and easy to navigate, allowing users to add, organize, and manage tasks with minimal effort.

3.4.3.2 Task Organization and Sorting: Provide intuitive ways to organize tasks, such as drag-and-drop functionality for sorting, grouping tasks by priority, due date, or category, enabling users to personalize their task lists efficiently.