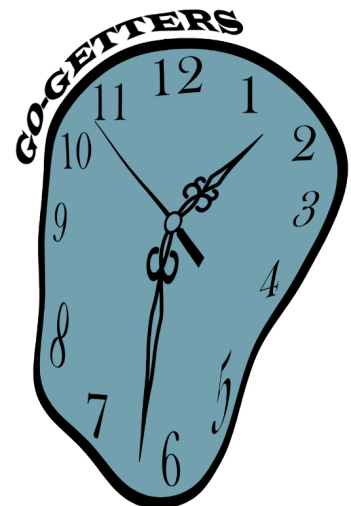


GoGo

Revised System Inception Model

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## Requirement Model

### Backlog

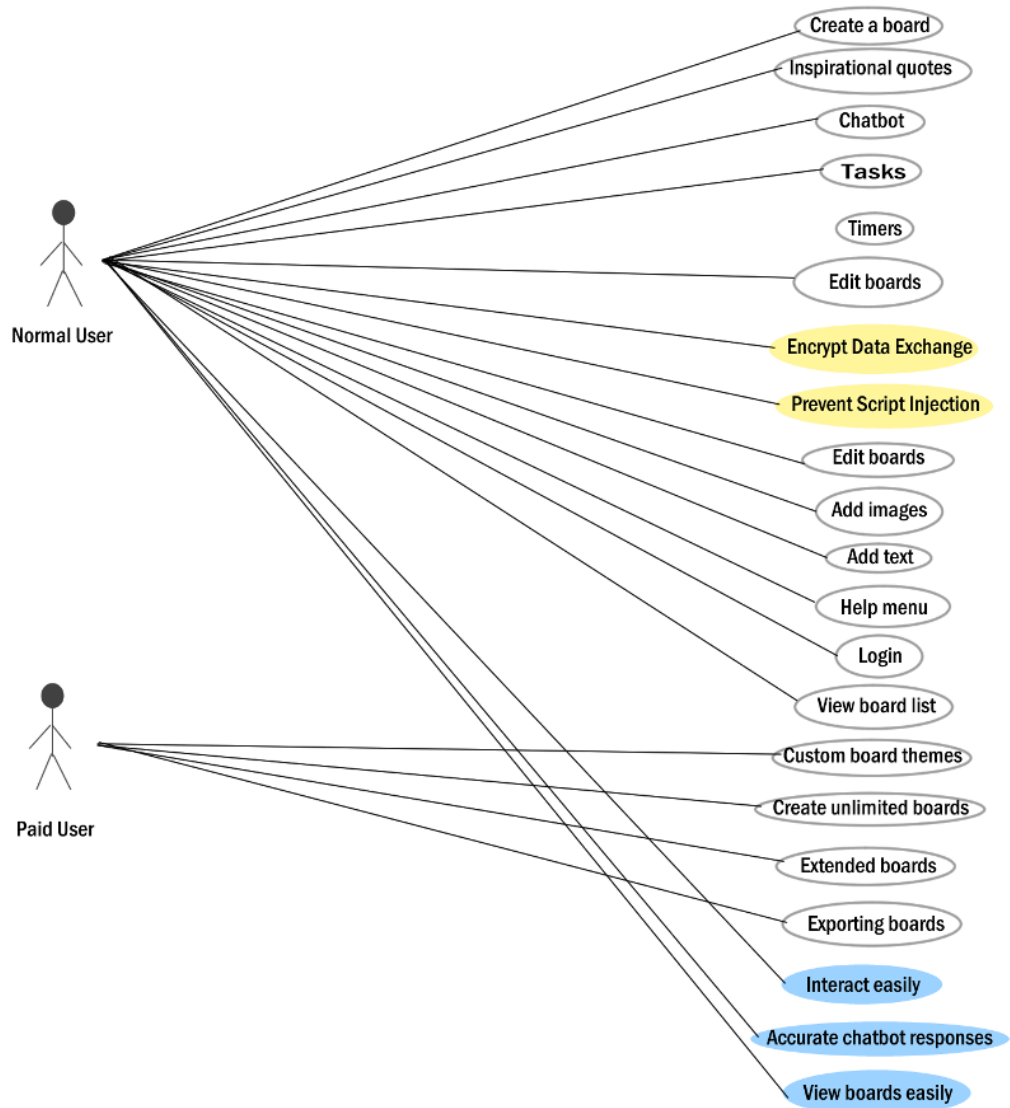
Label	User Story
Create a board	As a <i>user with an account</i> I want to be able to easily create new boards to use in the app.
Create unlimited boards	As a <i>Platinum user with an account</i> I want to be able to create unlimited boards, unlike the usual ten you can make as a non-paying user.
Custom board themes	As a <i>Platinum user with an account</i> I want to be able to add custom themes to personalize my boards.
Inspirational quotes	As a <i>user with an account</i> I want to be able to enable the option to view inspirational quotes to motivate me each time I create a new task using the app.
Chatbot	As a <i>user with an account</i> I want to be able to utilize the GoGo chatbot to ask questions and gain assistance with organizing my boards and setting deadlines.
Tasks	As a <i>user with an account</i> I want to be able to set different tasks for each project that I start to help me organize what needs to be done for each project.
Timers	As a <i>user with an account</i> I want to have the option to set timers for various tasks while I'm working to help organize my workflow.

Extended boards	As a <i>Platinum user with an account</i> I want to have the option to have larger/more complicated boards than can be done with the unpaid version.
Exporting boards	As a <i>Platinum user with an account</i> I want to be able to export my boards into downloadable images and/or PDFs.
Add images to boards	As a <i>user with an account</i> I want to be able to add images to my boards.
Add text to boards	As a <i>user with an account</i> I want to be able to add text to my boards.
Help menu	As a <i>user with an account</i> I want to be able to access a help menu with information and contact to GoGo Support.
View list of boards	As a <i>user with an account</i> I want to be able to view a list of the boards I have created.
Login	As a <i>user with an account</i> I want to be able to login to GoGo.
Encrypt Data Exchange	As a <i>user with an account</i> I would like the board data I enter to be encrypted when I create or edit a board so that I can be certain that the integrity of my data is maintained.
Prevent Script Injection	As a <i>user with an account</i> I would like users to not be able to inject a script in user boards so that I do not have to manually scan user boards for rogue scripts.
Edit boards	As a <i>user with an account</i> I want to be able to edit the boards that I have created after I have created them.

Interact easily	As a <i>user with an account</i> I want to be able to easily interact with the different elements in the app and find them easily.
Accurate chatbot responses	As a <i>user with an account</i> I want the chatbot AI to be well trained to give accurate and useful responses most of the time.
View boards easily	As a <i>user with an account</i> I want to be able to easily find and manage my existing boards so I can access and edit them when I need to.

### Revised Use Case Diagram

The following diagram provides a graphical depiction of the ODHkr App requirement model. Functional requirements are represented using a white background, non-functional requirements are represented using a blue background, and security requirements are represented using a yellow background.



## Actor Details

*Actor details remain unchanged and are included for completeness.*

Actor	Description
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Normal User	These users have created a GoGo account and can use it to create a limited number of boards and use most features of the app.
Paid User (Platinum)	A platinum user is someone who is paying money for a platinum account in order to unlock more features, such as infinite boards they can create and more features within the app.

## Technology Plan

*The Technology Plan has not changed, but is included for completeness.*

Technology	Experience Rating
<b>Application and Web Development</b>	
Java	Extensive
Swift	None
HTML 5	Moderate
Javascript	Moderate
JQuery	Moderate
BootStrap Framework	Tutorial
Iconic Framework	None
<b>Web Server Scripting</b>	



Node.js	Small scale
PHP	Small scale
AI	
OpenAI Integration	Small scale
Phone App Technologies	
iOS	Moderate
Android	Small scale
React Native	Small scale

### Experience Rating Scale

Rating Value	Description
None	No experience using technology.
Tutorial	Have worked through tutorials on the technology or have used the technology in a class.
Small Scale	Have completed a project for a class using the technology or completed a small program on your own to learn the technology.
Moderate	Have used the technology in more than one class or have used it in some job.
Extensive	Have used the technology on a job.

## Risk Analysis

### Risk Severity

ID	Technical Risk	Description
1	Technical Complexity	Task management systems often utilize various APIs and protocols for data exchange and interaction. Integrating the new program with these systems requires a deep understanding of the intricacies of each API and protocol, potentially leading to challenges in establishing seamless communication channels.
2	Data Security and Privacy	Task management systems often enforce stringent security measures and access control policies to protect sensitive user data. Integrating the new program requires implementing robust authentication mechanisms, encryption standards, and access control protocols to ensure secure data transmission and storage. Failure to address security concerns adequately may expose the system to vulnerabilities such as data breaches or unauthorized access.
3	Resource Constraint	If the program supports collaborative features or synchronization with cloud services, network bandwidth limitations can pose a significant challenge. Transferring data between the client and server, synchronizing updates across multiple devices, or fetching external resources such as images or attachments can strain network bandwidth, leading to slow data transfer rates, connectivity issues, or service disruptions. Efficient network communication protocols, data compression techniques, and

		bandwidth management strategies are essential to mitigate these risks and ensure smooth data exchange over the network.
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ID	Technical Risk Severity	Bus-Mkt	Bus-Usrs	Bus-Val
1	Technical Complexity	M	H	H
2	Data Security and Privacy	H	H	H
3	Resource Constraint	H	M	H

ID	Business Risk	Description
1	Market Competition and Advertising	The task management software market is highly saturated, with numerous established players offering similar features and functionalities. Introducing a new program into such a competitive landscape increases the challenge of gaining visibility and capturing market share. Users may already be accustomed to existing solutions, making it difficult for a new program to differentiate itself and attract users' attention.
2	The GoGo app fails to fulfill the criteria set out in its advertising	The marketing team may overstate the program's capabilities or features in promotional materials, advertisements, or product descriptions to attract users' attention and drive adoption. However, if the program's actual functionality or performance does not align with the advertised claims, it can lead to user dissatisfaction, loss of trust, and negative reviews, damaging the program's reputation and credibility in the market.

3	System changes cause unplanned interruption of GoGo App operation.	Changes to the underlying operating system, runtime environment, or hardware infrastructure on which the program runs can impact its behavior and performance. Operating system updates, security patches, or hardware upgrades may introduce compatibility issues, configuration conflicts, or performance bottlenecks that require adjustments or optimizations to maintain the program's reliability and performance.
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ID	Business Risk Severity	Bus-Mkt	Bus-Usrs	Bus-Val
1	Market Competition and Advertising	H	L	H
2	The GoGo app fails to fulfill the criteria set out in its advertising	H	M	H
3	System changes cause unplanned interruption of GoGo App operation.	H	H	M

### Business Goals

ID	Business Goal
Bus-Mkt	Develop an easy to use project management tool
Bus-Usrs	Be a user-friendly comprehensive management tool

Bus-Val	Increase value by giving it unique features
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### Risk Mitigation Plan

ID	Risk	Mitigation Action
1	Technical Complexity	<p>Make thorough research before developing the software. We will also develop a strategy to ensure that this research is conducted in a cost efficient manner and distributed to all team members so that everyone has the information needed. Furthermore, we will develop a plan for training our employees to work with the complex systems required for development.</p> <p>Conduct a comprehensive analysis of the APIs and protocols used by target task management systems to understand their functionalities, limitations, and compatibility requirements upfront.</p>
2	Resource Constraint	<p>Define resource management policies and constraints to enforce resource usage limits and prevent resource exhaustion or contention. Implement adaptive resource allocation strategies to dynamically adjust resource utilization based on workload characteristics, user demand, and system constraints to optimize resource utilization and maximize program efficiency.</p>

3	Data Security and Privacy	Integrate robust security mechanisms, such as authentication, encryption, and access control, into the program's architecture from the outset. Follow industry best practices and compliance standards to mitigate security risks effectively and safeguard user data against unauthorized access or malicious attacks.
4	Market competition and Advertising	<p>Make an in-depth market research to create the best branding strategy. This strategy will likely include advertisement of our unique features (such as our AI) and a heavy emphasis on how our product combines and improves upon many features from the market competition. The focus will be to demonstrate why our product is an improvement on what you might see elsewhere.</p> <p>We will also take opportunities in gaps in the market to fill a niche with our product and gain attention from our intended market audience.</p>
5	The GoGo app fails to fulfill the criteria set out in its advertising	Foster open communication and collaboration between the marketing, product management, and development teams to ensure alignment on feature requirements, expectations, and advertising claims. Establish clear channels for feedback, clarification, and documentation to minimize misunderstandings and discrepancies throughout the development lifecycle.

6	System changes cause unplanned interruption of GoGo App operation.	Adopt continuous integration and continuous testing practices to validate program functionality, performance, and compatibility across different environments, platforms, and configurations. Integrate automated test suites, regression tests, and compatibility checks into the development pipeline to identify and mitigate issues arising from system changes early in the development process.
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## Effort Estimate

*The Effort Estimate has not changed, but is included for completeness.*

## Nominal Effort Calculation

Screen/Report	Complexity	Obj Points	Notes
Login	Simple	1	A simple login screen with a field for the user to enter their login information.
View List of Boards	Simple	1	Screen will be constructed by pulling the list of the user's existing boards.
Edit Board	Medium	2	A screen that can be accessed from the board list screen that allows

			them to view and edit a board.
<b>Subscreens for Edit Board</b>			
Chatbot	Medium	2	A sub-menu that can be viewed while working on the board. Fairly simple, but will require OpenAI integration.
Inspirational Quotes	Simple	1	A small menu on the screen to generate inspirational quotes.
Add Themes	Medium	2	A sub-menu that displays a list of themes. Displaying them will be easy, but applying them to boards will require a bit more effort.
Tasks and Timers	Simple	1	A submenu to allow users to set new tasks and start timers.
Export Board	Medium	2	Export your board as a pdf, png, or jpg.
Board Text	Simple	1	Add small amounts of text to your boards. Will need to display text afterwards.
Board Images	Simple	1	Add images to your boards



<b>Subscreens for List of Boards</b>			
Help Menu	Simple	1	Be able to view a menu with instructions for contacting GoGo support.
Create Board	Simple	1	A button that will pull up a subscreen with the options for adding a new board that is blank or has a preset format.
<i>Screen Totals</i>			Total object points for the screens.
<b>3GL Components</b>			
OpenAI Integration for Application	1	15	OpenAI integration for use in the Chatbot.
Server Components	2@10	20	Server-side scripts for managing mobile interactions & board data.
<i>3GL Total</i>		35	Total object points for the 3GL Modules.
Total Object Points		51	Total Object Points for the project

## Effort Estimate

### Assumptions

- Productivity (PROD)
  - PROD estimate is nominal (13)

- Justification: experience with some technologies and methods in the technology plan
- Little/no code reuse is anticipated so Adjusted Effort = Nominal Effort(NOP) = 51 object points
- Effort Estimate in person months (PM)
  - Effort(PM) =  $51/13 = 3.92$  person months
- Effort in Calendar Schedule
  - 3 authors @ 12 hours per week
  - 144 (36x4) hours per month on the project
  - 4.57 months (140 hours/person month x 3.92 person month)/120 hours/month

## Initial Architecture

*The Initial Architecture has not changed, but is included for completeness.*

