GoGo

System Inception Model

Go-Getters (Wubi Halefom, Seb Gonzalez and Cassidy Bates)
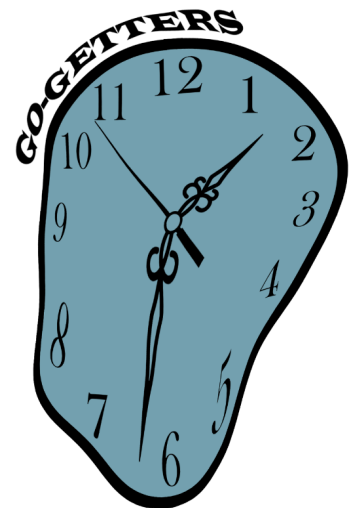
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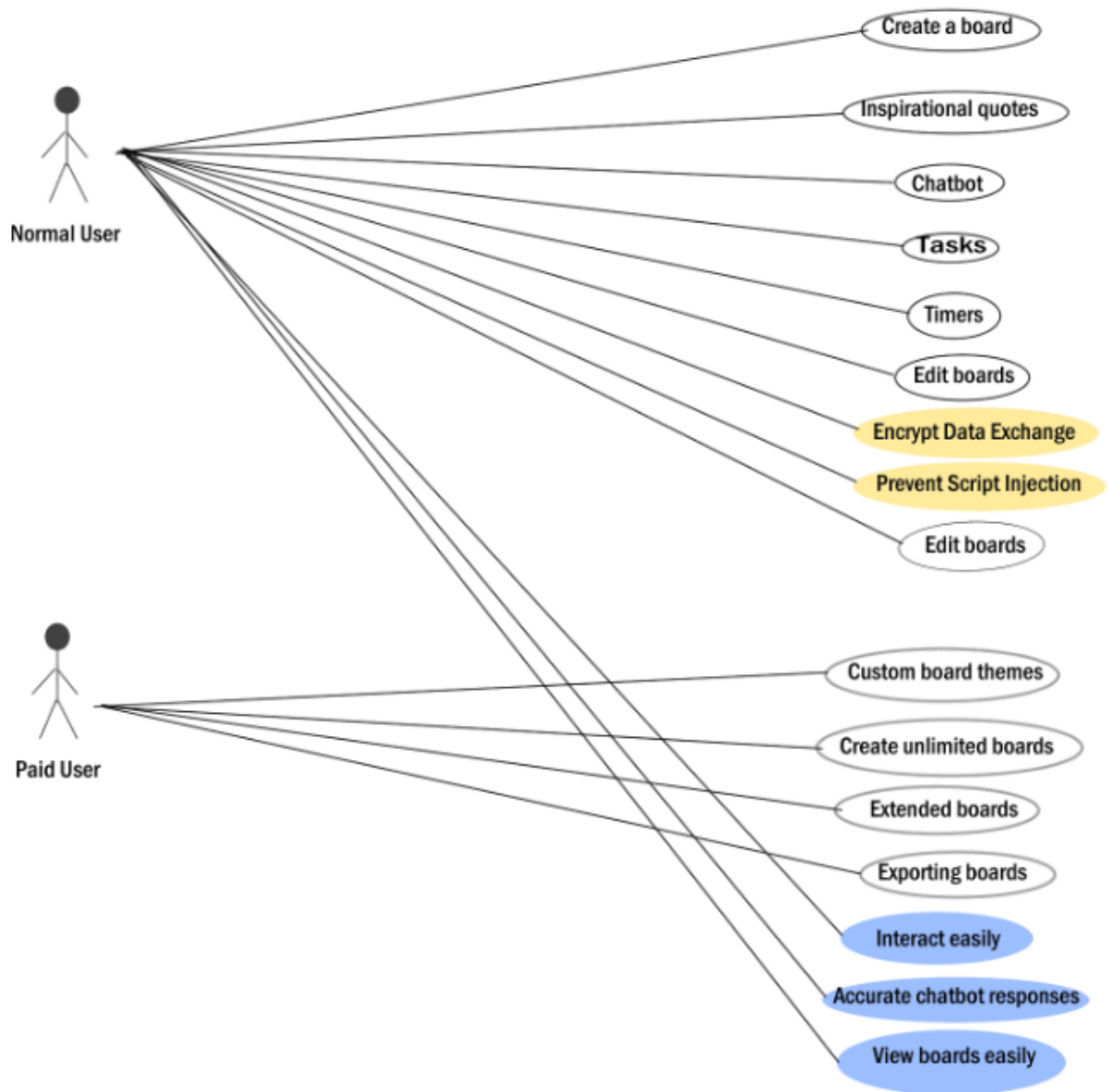
Requirement Model

Backlog

Label	User Story
Create a board	As a *user with an account* I want to be able to easily create new boards to use in the app.
Create unlimited boards	As a *Platinum user with an account* 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 *Platinum user with an account* I want to be able to add custom themes to personalize my boards.
Inspirational quotes	As a *user with an account* 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 *user with an account* 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 *user with an account* 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 *user with an account* 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 *Platinum user with an account* I want to have the option to have larger/more complicated boards than can be done with the unpaid version.

Exporting boards	As a *Platinum user with an account* I want to be able to export my boards into downloadable images and/or PDfs.
Add images to boards	As a *user with an account* I want to be able to add images to my boards.
Add text to boards	As a *user with an account* I want to be able to add text to my boards.
Help menu	As a *user with an account* I want to be able to access a help menu with information and contact to GoGo Support.
View list of boards	As a *user with an account* I want to be able to view a list of the boards I have created.
Login	As a *user with an account* I want to be able to login to GoGo.
==Encrypt Data Exchange==	As a *user with an account* 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 *user with an account* 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 *user with an account* I want to be able to edit the boards that I have created after I have created them.
Interact easily	As a *user with an account* I want to be able to easily interact with the different elements in the app and find them easily.

Accurate chatbot responses	As a *user with an account* I want the chatbot AI to be well trained to give accurate and useful responses most of the time.
View boards easily	As a *user with an account* I want to be able to easily find and manage my existing boards so I can access and edit them when I need to.

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	Description
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

Technology	Experience Rating
Application and Web Development	
Java	Extensive
Swift	None
HTML 5	Moderate
Javascript	Moderate
JQuery	Moderate
BootStrap Framework	Tutorial
Iconic Framework	None
Web Server Scripting	
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	GoGo requires the integration of real-time features, which includes synchronizing data over the network, as well as maintaining a responsive user experience with real-time updates. (i.e. creating multiple boards at once)
2	Data Security and Privacy	The product will involve collecting and managing the information of users, as well as sensitive data like payment information. This poses a significant data security and privacy risk, which means that GoGo will have to adhere to different data protection regulations (HIPAA, GDPR, etc.)
3	Resource Constraint	The product faces a resource constraint from hosting the infrastructure, which can affect performance, scalability, and reliability.

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	GoGo has a significant amount of market competition that can cause challenges in making the application profitable. As a result, advertisement will be a risk as if it is not well done the product may not sell as well as its competition.
2	The GoGo app fails to fulfill the criteria set out in its advertising	As detailed above, advertising will be an important factor in GoGo's success. If it fails to fulfill each promise made in early advertising, that will severely impact the app's reputation with its target audience.
3	System changes cause unplanned interruption of GoGo App operation.	Since a large part of GoGo relies on other systems (mainly OpenAI for its AI features), changes or failures of these systems will severely impact the usability of the app and therefore negatively impact its perception by the target audience.

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 uniques features

Risk Mitigation Plan

ID	Risk	Mitigation Action
1	Technical Complexity	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. We will additionally focus on requirements and design before implementation in order to provide a solid foundation for our development and ensure that there are no gaps in our skills and knowledge for what is needed in development.

2	Resource Constraint	Make a deeply studied calculated allocation of resources before the implementation of the software design. This can be done using a good effort estimate and an assessment of what skills will need to be learned prior to development.
3	Data Security and Privacy	We will also include in our technical plan (detailed above) time for creating a secure method of storing and retrieving user information. This can be done by following data protection and privacy laws/rules in our development of the application. Communicating with the whole team will furthermore be an important factor in this as it will allow a good flow between team members to ensure that all parts of the application work together securely and have no weaknesses.
4	Market competition and Advertising	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. 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.

5	The GoGo app fails to fulfill the criteria set out in its advertising	In order to ensure that there is no accidental false advertising, we will focus all of our advertising around the most essential features of the app. This way, all features shown are ensured to be in the app as they are core features that the app can't function without. For secondary features, we can do another batch of advertisement once those features have been implemented.
6	System changes cause unplanned interruption of GoGo App operation.	The app will use backup functions to ensure that the app still works with limited functionality in the case that system changes from outside sources impact the app's usability. This way, while it may still be negatively impacted, the app does not go down in the case of unplanned interruptions.

Effort Estimate

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.
Subscreens for Edit Board			
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
Subscreens for List of Boards			
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.
Screen Totals			Total object points for the screens.
3GL Components			
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.
3GL Total		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