

# Blueprint: A Framework for Collaborative Success

Requirements Specification & Technical Roadmap

Isaac Trejo Mendoza, Jacob McPherson, Jeongha Park, and Obadiah Sieg

The screenshot shows the Asana interface for a workspace named "Lindy's Worksp...". The main view is titled "Book Deliveries" and displays a table of deliveries. A modal menu is open at the top left, triggered by a blue "+" button. The menu options include "New Item", "Search", "Person", "Filter", "Sort", "Hide", and three dots. Below this is a dropdown menu with options: "New Board", "New Doc", "New Dashboard", "Choose from templates", "Import data", "Apps", "New Form", and "New Folder". The "New Dashboard" option is highlighted with a blue box and has a blue arrow pointing to it from the left. The main table lists deliveries for "Koo's Nest" on various dates with different vehicles and drivers. At the bottom, there is a section titled "▼ Kids Fiction" with a single entry for "James and the Giant Peach".

Item	Driver	Vehicle	Date	Hours
		Van 1	Jul 9	1
		Truck	Jul 13	3
		Van 2	Jul 14	2
Koo's Nest		Bicycle	Jul 25	1
		Van 1	Jul 18	5
		Van 2	Jul 20	2

▼ Kids Fiction

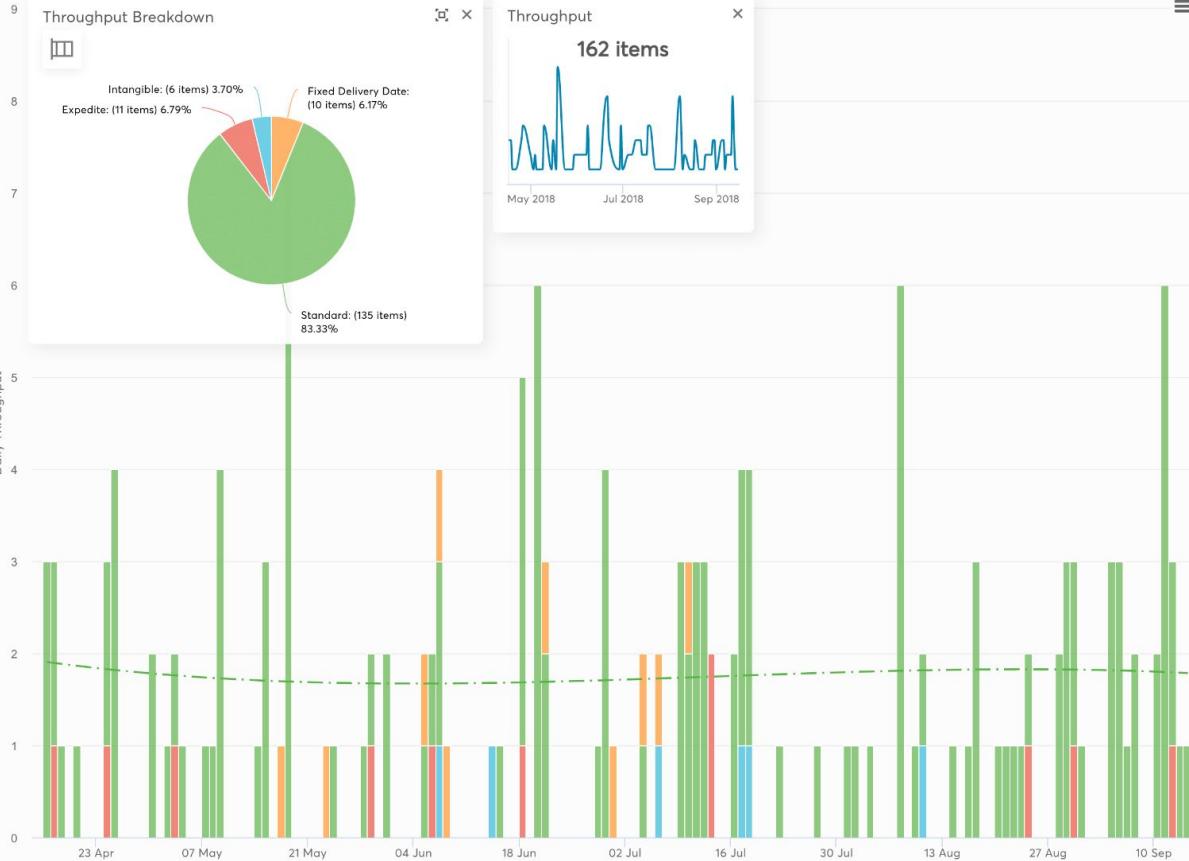
Item	Driver	Vehicle	Date	Hours
James and the Giant Peach		Truck	Jul 13	1



Development



## Throughput Run Chart



Controls

Trendline  Enabled

Group by  Day  Week  Month

Filters

Lists  Select all  To do  Development  Code review  Code review (Done)  Testing  Testing (Done)  Deployment  Done

Labels  Select all  Expedite  Fixed Delivery Date  Intangible  Standard

Members



Home  
Notifications  
Goals

Spaces 

Everything  
**D Design**  
**E Engineering**  
**P Product**

Dashboards 

Docs 



Project

Box

Board

Timeline

Doc

Whiteboard

## Workload



Brendan

23

Not done

6

Done

50%

### TIME ESTIMATE

5d 15h

Not done

6h

Done

34H

remaining

⚠️ 19 tasks without estimate

▼ READY (8)

▼ IN PROGRESS (14)

▼ REVIEW (14)



12

Not done

1

Done

25%

▼ READY (1)

▼ IN PROGRESS (17)

▼ REVIEW (8)



Amy

12

Not done

3

Done

50%

### TIME ESTIMATE

1d 15h

Not done

3h

Done

12H

remaining

⚠️ 17 tasks without estimate

▲ READY (8)

TIME EST.

■ User research - P... 2h

■ Wireframe new... 0.5h

■ Review & Appro... 2h

▼ IN PROGRESS (2)

▼ REVIEW (3)

# Introduction



- The problem: group projects are typically hard to manage in a group setting and the tools out there are far too complicated to warrant using them in the first place.
- The solution: a simple project management web application that is free to use and compares everyone's schedules to find the best time for them to meet and collaborate on group projects.
- The core philosophy: minimalist and student focused.
- Gamification elements to keep the users motivated and consistent with the project's management

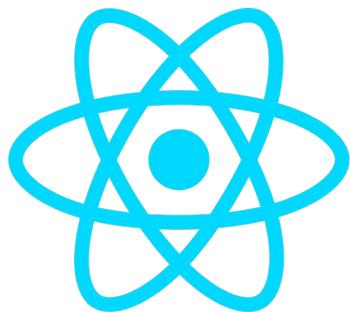
# Overview

- Tools & Technologies
- Project Requirements
- Tentative Schedule

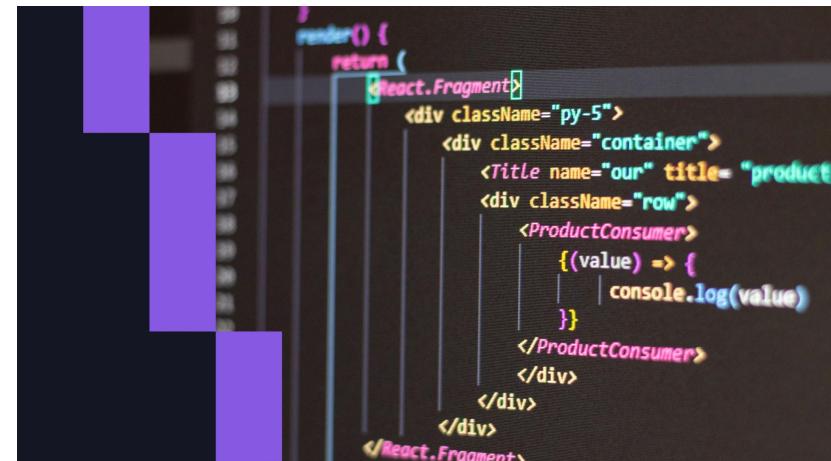
# Tools & Technologies

React	Front end with a component-based, reactive U.I.
Supabase	Back end for a real time database and Google OAuth 2.0.
Vercel	Back end, hosting, and deployment of the website.
Figma	Design and rapid inspiration of the G.U.I.

# Front End



# React



A screenshot of a code editor showing a React component. The component is named 'ProductConsumer' and contains a title and a row of products. The code uses React Fragments and functional components.

```
render() {
  return (
    <React.Fragment>
      <div className="py-5">
        <div className="container">
          <Title name="our" title="product" />
          <div className="row">
            <ProductConsumer>
              {(value) => {
                |   |   console.log(value)
              }}
            </ProductConsumer>
          </div>
        </div>
      </React.Fragment>
```

# Back End



The screenshot shows the Supabase Backend interface. At the top, there's a navigation bar with Home, + Add, Library, Plugins, Auth, Backend, and More. The main area has tabs for Layout, Data, Actions, and a search bar. On the left, there's a sidebar with Collections (properties selected), a New button, and a Variables section with a Create global variables button. The main workspace is divided into sections: properties (Select a source: Supabase, Dynamic), Configuration (Table properties), Query configuration (Pagination: Off, Filter, Sort), and Fetch data (This collection is fetched automatically). To the right, a Data panel shows a preview of the data with a Success message. The data is listed in two sections: 0 and 1, each with an object containing fields like id, title, description, price, bedrooms, bathrooms, address, and square\_feet.

```
Success
0
id: "e8c027c8-73fa-40ac-b380-f11a3676d42"
title: "Modern Downtown Loft"
description: "Stunning modern loft with
price: 450000
bedrooms: 2
bathrooms: 2
address: "123 Downtown Ave"
square_feet: 1200
1
id: "c324dc36-9f30-4c18-b700-1ab9bdc70b3"
title: "Suburban Family Home"
description: "Spacious family home with
price: 650000
bedrooms: 4
bathrooms: 3
address: "456 Maple Street"
square_feet: 2800
> 2 Object
> 3 Object
> 4 Object
> 5 Object
> 6 Object
> 7 Object
> 8 Object
> 9 Object
```

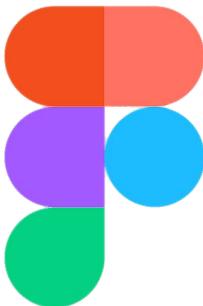
# Server

▲ Vercel

The screenshot shows the Vercel DevTools interface. On the left, a sidebar displays deployment logs for various projects, including "acme-store" and "acme-japan". The main area features a code editor with the "index.html" file open, showing basic HTML structure. To the right is a file tree showing the project structure with files like "index.html", "favicon.ico", and "robots.txt". A bottom status bar indicates the code is "Building".

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width" />
    <link rel="icon" type="image/svg+xml" href="/favicon.ico" />
    <title>Acme Store</title>
    <meta name="description" content="Acme Store" />
  </head>
  <body>
    <div id="root"></div>
  </body>
</html>
```

# Additional Tools



# Figma

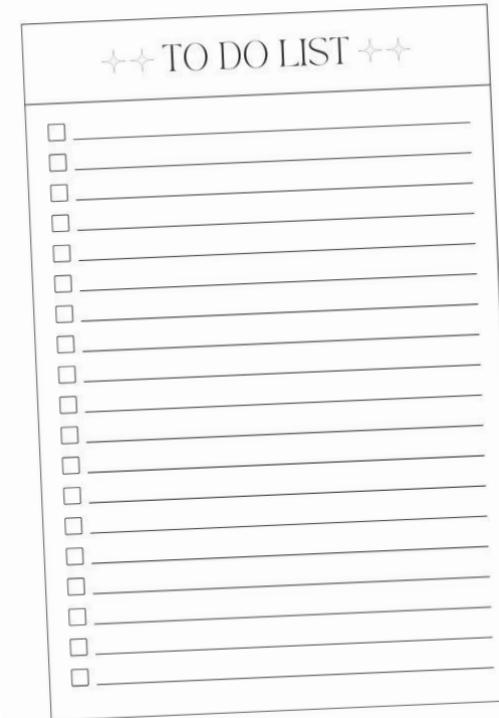
The screenshot displays the Figma application interface. On the left, the sidebar contains a navigation menu with sections like 'Pages', 'Components', 'Assets', and 'Code'. Under 'Pages', there are items such as 'Round 1 review 5/8', 'Player explorations', 'Sign-in screen', and 'Archive'. Under 'Components', there are categories like 'M / Tempo / Playlist Detail', 'M / Tempo / Filters', 'M / Tempo / Home', and 'Frame'. The main workspace shows a blurred image of a person looking at a city skyline at night. Overlaid on this are several UI elements: a pink button labeled 'Auto', a search bar with a magnifying glass icon and the number '24', a red button labeled 'Developer', and a green button labeled 'Designer'. Below the workspace, the text 'Palms Sylvan' is visible. The right side of the interface features the 'Inspect' panel, which shows details about selected components like 'M / Heading' and 'Dev resources'. It also includes a 'Component' section with a preview of the 'Discover' component and its properties, such as 'Variant: iPhone 375', 'State: Default', and 'Destructive: False'. At the bottom, the 'Layout' panel provides a detailed breakdown of the component's dimensions and padding.

# Project Requirements

- Task Management Component
- Calendar Component
- Notification System
- Design: examples and non examples
- Dashboard

# Task Management Component

- A dynamic task list: gives the user the ability to view the tasks, the members assigned to them, and their priority at a glance.
- Color-coded priorities: red for high, orange for medium, white for low, and green for completed tasks.
- Completion animation for when a task is finished.
- A “Past Tasks” view



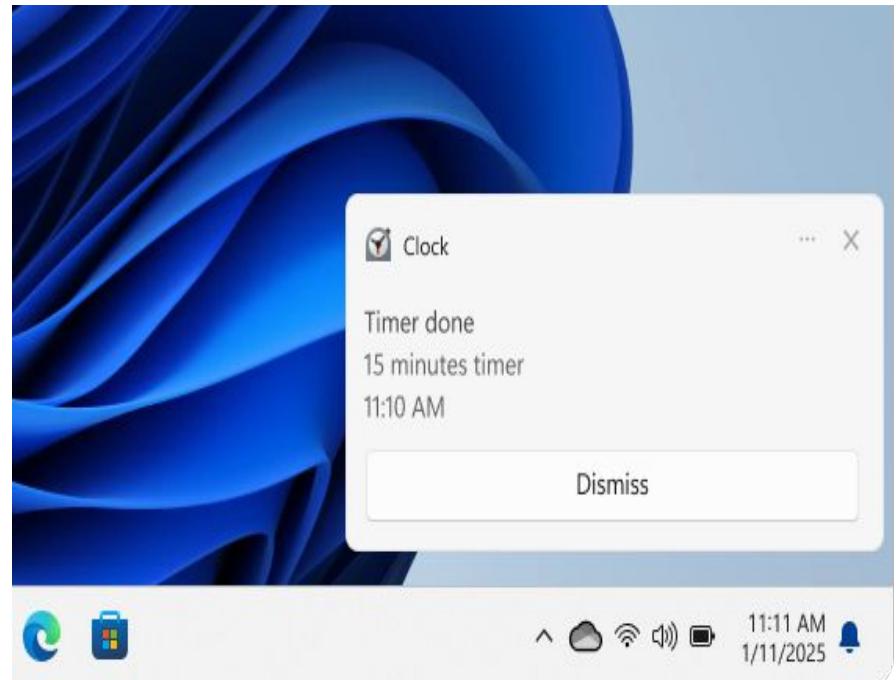
# Calendar Component

- Monthly grid view
- Selection for other months will be above
- The current month will be the default one shown
- The tasks shown will have one of the four priorities (white, orange, red, or green)
- Clicking any day on the calendar will show all the tasks assigned to that day
- Tasks will be automatically be “Unassigned” until the users assigns a due date for that specific task

S U N	M O N	T U E	W E D	T H U	F R I	S A T
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

# Notification System

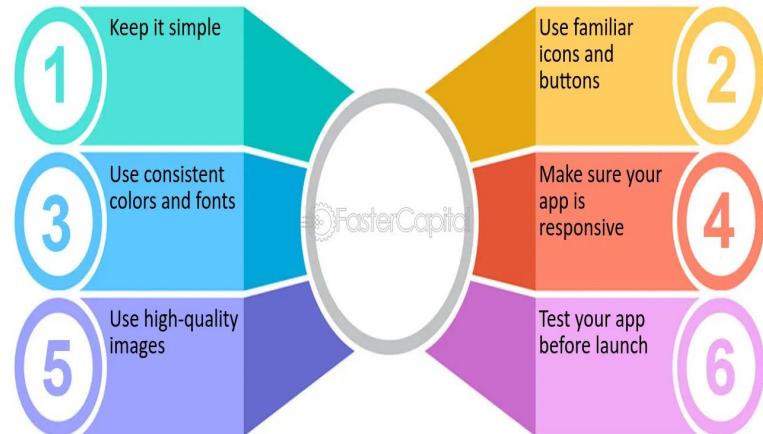
- 24 hours before due dates
- Audible alert
- Title and Task
- Notify when the time is changed by Daylight Saving Time begin



# Design

- Entertaining elements
- Replace the word task with quest
- Quest Rewards - 30 minute break, snack time, Play video games
- Encourage users to enter the work zone comfortably.

## Designing a user friendly interface



 Mirha

**Project**

- Hope project 

 **Dashboard**

 **Tracking**

 **projects**

 **work History**

**Tools**

-  **Inbox**
-  **Setting**

 **ADD NEW TASK**

 **JOE MAX**  
TEAM LEADER

## Dashboard

13 March 2021



 13 March 2021

**March 2021**

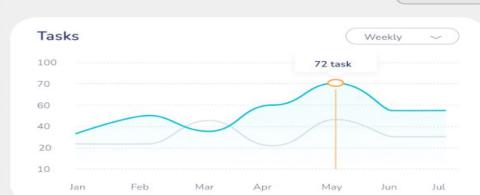
Welcome To  
**Your Task Management Area**



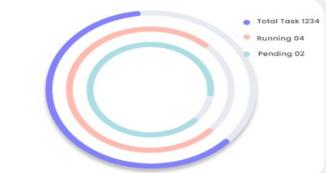


**1220 Total Task**    **07 InProgress**    **43 Pending**    **1550 completed**

**Total work**



**Task Percentage**



**Work Progress**

**Ongoing Project**  
**Dashboard Design**  
90 % Complete  
Start Date : 10 Jan End Date : 29 Jan

**Ongoing Project**  
**App UI UX Design**  
30 % Complete  
Start Date : 12 Jan End Date : 25 Jan

**Working Status**



**Upcoming**  
Wednesday, 13 March, 2021

**10 Am**    **11 Am**    **12 Pm**    **1 Pm**

- Research** 03 People
- Landing Page Design** 03 People
- Dashboard Design** 03 People
- Design Theory** 03 People



# Unacceptable Design Examples

Advanced Project Management Task Tracking Template										<a href="#">Settings</a>	
Project name:		Task Details								Budget	Actual
Task	Subtask	Priority	Description	Assigned	Due Date	Status	Progress	Start Date	Due Date	Days Left	
Task1	Subtask1	Low		In Progress	20%	9/1/2024	2/20/2024	-479		\$1,000	
	Subtask2	Medium		Complete	100%	4/20/2024	-			\$1,000	
	Subtask3	Urgent		On Hold	33%	3/10/2024	-474			\$1,000	
	Subtask4	High		In Progress	66%	2/10/2024	-466			\$200	
Task2	Subtask1	Medium		In Review	100%	2/20/2024	-460			\$1,000	
	Subtask2	High		Overdue	0%	2/20/2024	-455			\$1,000	
		Low				3/10/2024	-445			\$1,000	
Task3								3/25/2024	-401		
Task4									-		
Task5									-		
Task6									-		
Task7									-		

Multiple Project Tracking Excel												
#	Analysis and Design		Build		Test Case Library		Quality		Implementation		Key Dates/Notes	
	100%		95%		65%		0%		0%		Need sample ASAP	15-Feb
Project 1 (Jan)	Schedule	Good	Schedule	Good	Schedule	Good	Schedule	Good	Schedule	Good	Testing Deployment	15-Feb
	Scope	Good	Environment	Good	Scope	Good	Environment	Good	Impact	Good		Ahead
	Requirements	Good	Issues	Worry	Coverage	Good	Defect Count	Good	Plan	Good		
	Resourcing	Good	Resourceing	Good	Resourcing	Good	Resourceing	Good	Risks	Good		
	Development cannot be completed without sample.				Test Cases not progressed as planned.				Start date of 17-Feb.			Planned with the below project.
Project 2 (Feb)	Schedule	Good	Schedule	Good	Schedule	Good	Schedule	Good	Schedule	Good	Testing Complete	12-Feb
	Scope	Good	Environment	Good	Scope	Good	Environment	Good	Impact	Good	Implementation	14-Feb
	Requirements	Good	Issues	Good	Coverage	Good	Defect Count	Good	Plan	Good		Green
	Resourcing	Good	Resourceing	Good	Resourcing	Good	Resourceing	Good	Risks	Worry		
	Systems ready for testing.				To start on Monday.				Too many interdependencies involved.			
Project 3 (Mar)	Schedule	Worry	Schedule	Good	Schedule	Good	Schedule	Good	Schedule	Good	Impact Analysis	4-Mar
	Scope	Worry	Environment	Good	Scope	Good	Environment	Good	Impact	Good		
	Requirements	Good	Issues	Good	Coverage	Good	Defect Count	Good	Plan	Good		
	Resourcing	Good	Resourceing	Good	Resourcing	Good	Resourceing	Good	Risks	Worry		
	Some of the team have not completed their analysis.				Work unknown till the analysis is complete.				To start on Monday.			Too many interdependencies involved.
Project 4 (Apr)	Schedule	Good	Schedule	Red	Schedule	Good	Schedule	Worry	Schedule	Good	Waiting for resolution of issues	TBA
	Scope	Good	Environment	Good	Scope	Good	Environment	Good	Impact	Good		
	Requirements	Good	Issues	Red	Coverage	Good	Defect Count	Good	Plan	Good		
	Resourcing	Good	Resourceing	Good	Resourcing	Good	Resourceing	Good	Risks	Good		
	Too many issues have surfaced in the build phase.				To be decided. Duration could be underestimated.				Not planned yet.			
Project 5 (May)	Schedule	Good	Schedule	Good	Schedule	Good	Schedule	Good	Schedule	Good	Testing	17-Feb
	Scope	Good	Environment	Good	Scope	Good	Environment	Good	Impact	Good	Implementation	18-Feb
	Requirements	Good	Issues	Good	Coverage	Good	Defect Count	Good	Plan	Good		
	Resourcing	Good	Resourceing	Good	Resourcing	Good	Resourceing	Good	Risks	Good		
	Resource on planned leave. Duration also may not be enough.				Planned on 18th Feb.				Planned with the below project.			

# Dashboard

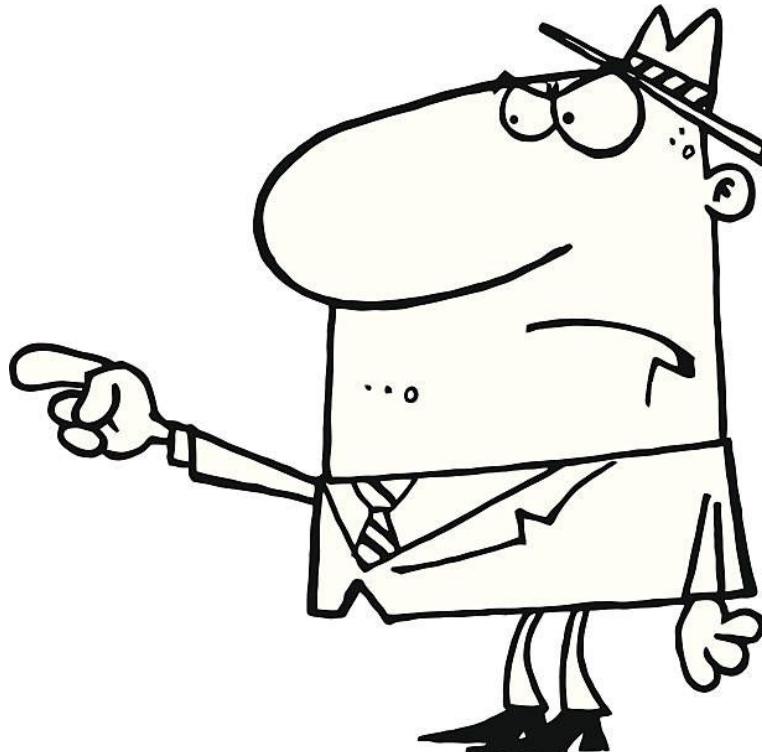
Google OAuth2



A completion bar to show the user's progress.



# Roles & Permissions



- Every user can be assigned a role from the creator (“Founder”) of that specific Blueprint
- These roles are Manager and User
- Managers will have full “Create, Read, Update, and Delete” privileges or (CRUD) for every tasks and members under the Blueprint
- Users can update their own assigned tasks and view the project’s overall status

# Tentative Schedule

Week 1: Feb 9-15	Finalize requirements document, initialize GitHub, and setup Supabase and Vercel
Week 2: Feb 16-22	Begin the front end with React and configure the database with Supabase
Week 3: Feb 23-Mar 1	Implement Google OAuth and begin laying out the dashboard
Week 4: Mar 2-8	Create the task list, calendar components, and hooks for the database
Week 5: Mar 9-15	Implement the task list and calendar and begin making the logic for the completion bar
Week 6: Mar 16-22	Create and implement the notification system, implement roles, and test for bugs
Week 7: Mar 23-29	Conduct an overall assessment of the website and fine tune the website with “Past Tasks”
Weeks 8-12: March-May	Create and implement gamification and ChatGPT API call, if time permits

# Conclusion



- Blueprint is the solution to group projects being hard to manage and there simply being too many project management tools out there that aren't simple enough for an academic environment
- Blueprint will be simple and easy-to-use, catering specifically to students
- We will be using React, Supabase, Vercel, and Figma to do this
- If time permits, we will implement gamification affects and an API call to Chat GPT to make suggestions for the user

# Questions?