

# **GNG 2101 Deliverable D**

## **Detailed Design, Prototype 1, BOM, Peer Feedback and Team Dynamics**

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# Table of Contents

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<b>List of Tables</b>	3
<b>List of Figures</b>	3
<b>1 Introduction</b>	4
<b>2 Summary of Client Feedback</b>	4
<b>3 Detailed Design Concept</b>	5
3.1 Software Design	8
3.1.1 Subsystem 1 - Aesthetics	9
3.1.2 Subsystem 2 - Functionality	9
3.1.3 Critical Product Assumptions	10
3.2 Prototype 1	11
3.2.1 Prototype testing	11
<b>4 Client Meeting #3 Outline</b>	13
<b>5 Bill of Materials</b>	14
<b>6 Conclusions and Recommendations for Future Work</b>	14
<b>7 References</b>	15
<b>APPENDIX 1: Project Plan Update (Wrike)</b>	16
Planning	16
Monitoring and Control	18
Initiation	20
Execution	22
Closing	24

## List of Tables

---

<i>Table 1. Prototype testing results compared to target specifications.....</i>	<i>12</i>
<i>Table 2. Projected Bill of Materials for the final prototype.....</i>	<i>14</i>

## List of Figures

---

<i>Figure 1. Design concept of monthly layout of productivity planner.....</i>	<i>5</i>
<i>Figure 2. Design concept of weekly layout of productivity planner.....</i>	<i>6</i>
<i>Figure 3. Design concept of daily layout of productivity planner.....</i>	<i>7</i>
<i>Figure 4. Prototype of monthly layout of productivity planner.....</i>	<i>8</i>
<i>Figure 5. Prototype of weekly layout of productivity planner.....</i>	<i>8</i>
<i>Figure 6. Prototype of daily layout of productivity planner.....</i>	<i>9</i>
<i>Figure 7. Prototype of the functionality of the productivity planner.....</i>	<i>10</i>

# 1 Introduction

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This document describes the current development of the productivity planner prototype. This document supports the following objectives:

- Analyze customer feedback and comments on the conceptual design
- Identify existing project information and research
- List the recommended testing requirements and objectives
- Prototype development and analysis compared to target specifications
- Proposed outline of the next client meeting
- Preliminary bill of materials for the final prototype
- Provide updates to the project task plan

## 2 Summary of Client Feedback

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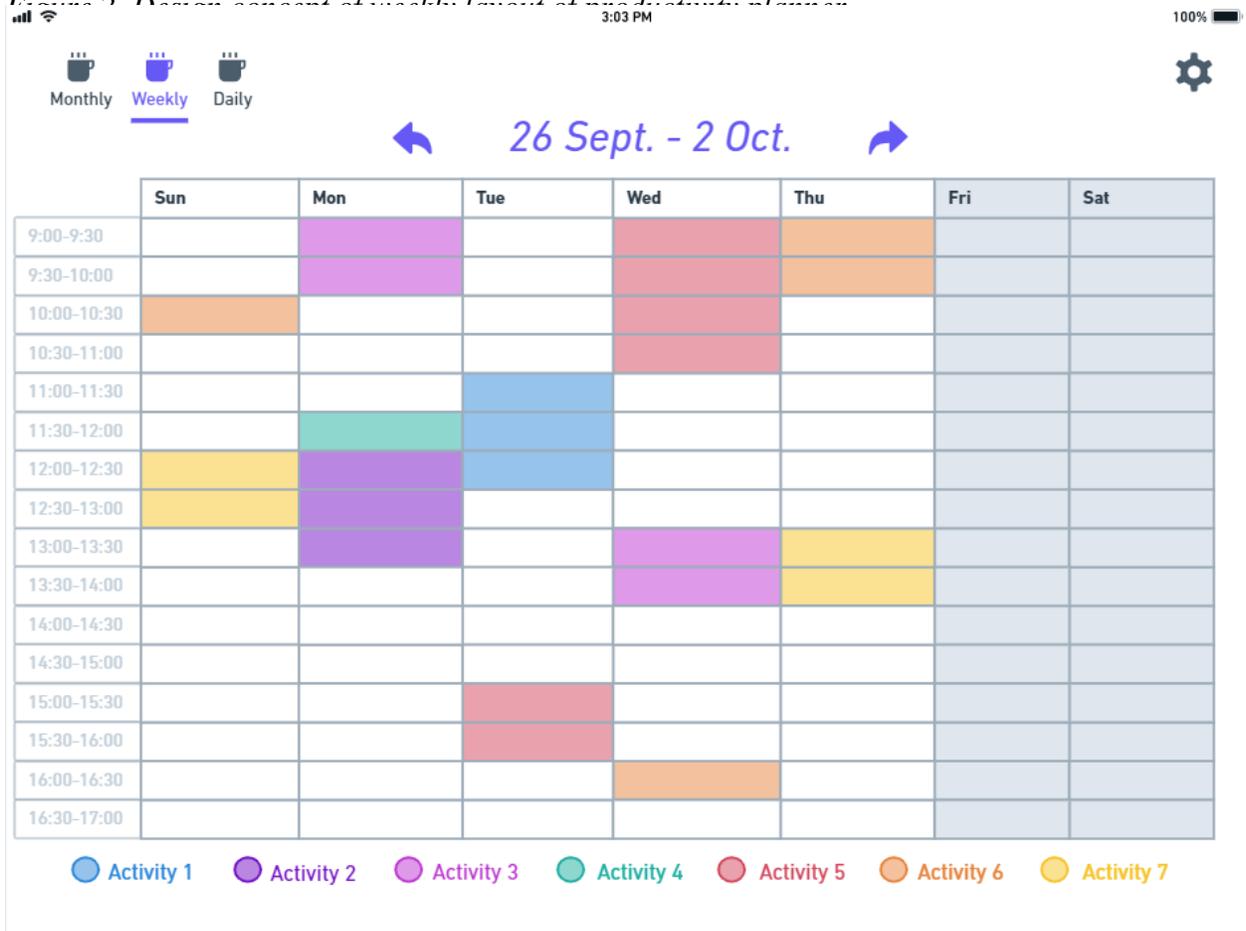
During our team's second meeting with our client, we had shown the conceptual designs created. When showing our designs we were able to gain interesting and useful insights from the feedback provided. Our client mentioned during the meeting that their week started from Sunday and ends on Thursday. Our design showed the week starting on Monday and ending on Friday. This was very useful information to receive and will help us create a planner that is tailored to our clients schedule. Our client continued providing our team feedback by telling us their preferences on the design of the planner. The client mentioned they would like to have the day written before the month in the planner. As well, they would like to have an option to switch between light and dark mode. In addition, they would prefer having the time written as a 12-hour clock rather than a 24-hour clock. Our team also received feedback on the things our client liked about our designs. The client enjoyed how there was a mood rate for the daily template and a box to add comments. She also liked how the time was written in 30 minute intervals for the daily template. Overall the client liked how the calendar was simple and neat. The client meeting gave our team the opportunity to show our conceptual designs to the client and receive feedback that will help us create a prototype that satisfies our clients needs.

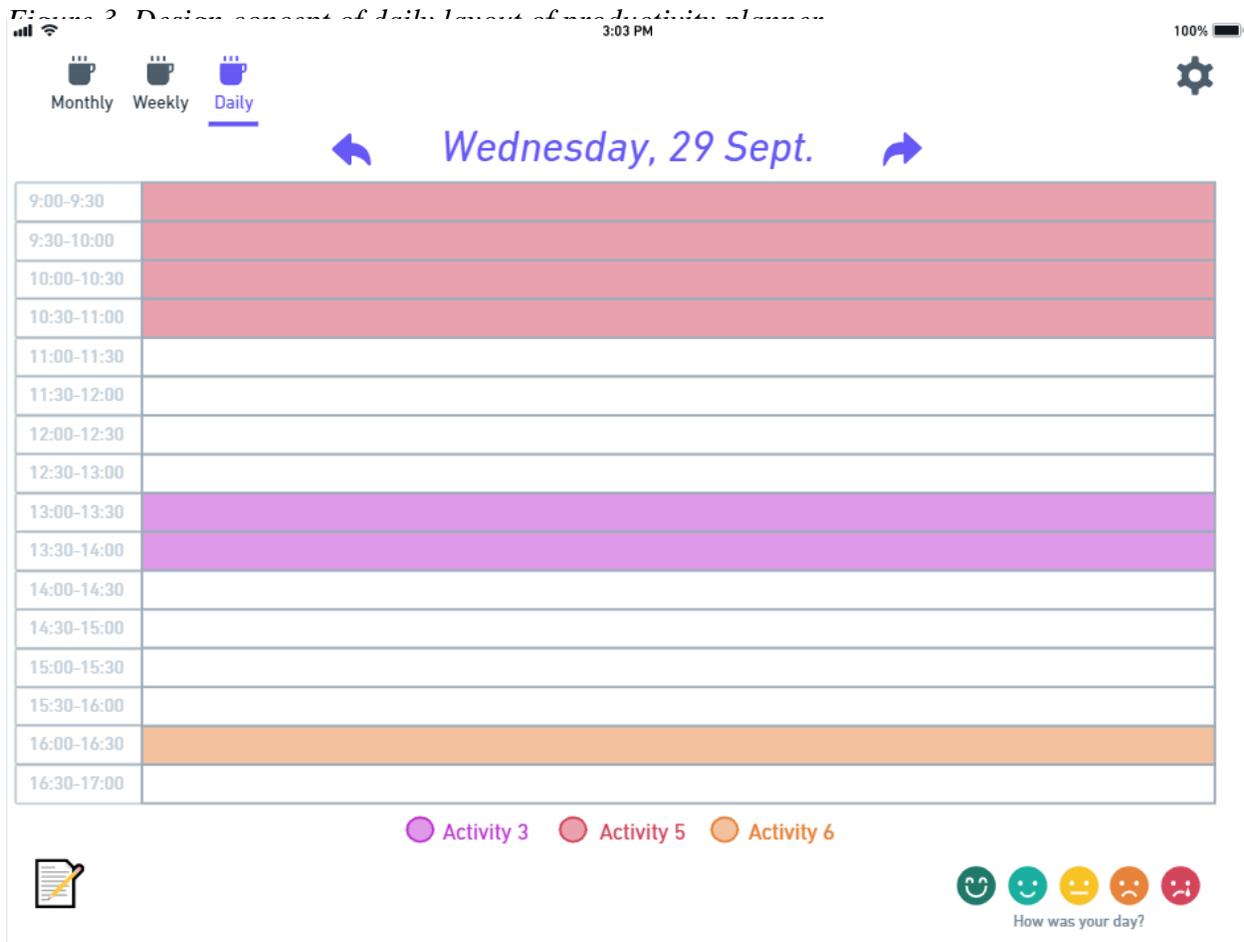
### 3 Detailed Design Concept

Figure 1. Design concept of monthly layout of productivity planner.



Figure 2 Design concept of weekly layout of productivity planner





Figures 1-3 all have colour-coded blocks representing daily events and the associated legend below the calendar. The monthly layout has a button with a plus sign, which would enable the user to add a new event. The daily layout has a reaction option, as well as a note option; the user can rate how they are feeling that day and add some notes. All three layouts contain a 'Settings' button, arrows to navigate through the month/week/day, respectively, and layout option buttons. As requested by our client, the weekends (shaded gray) have been changed to Friday and Saturday (instead of the usual Saturday and Sunday), and the date number has been placed before the month.

### 3.1 Software Design

Figure 4. Prototype of monthly layout of productivity planner.

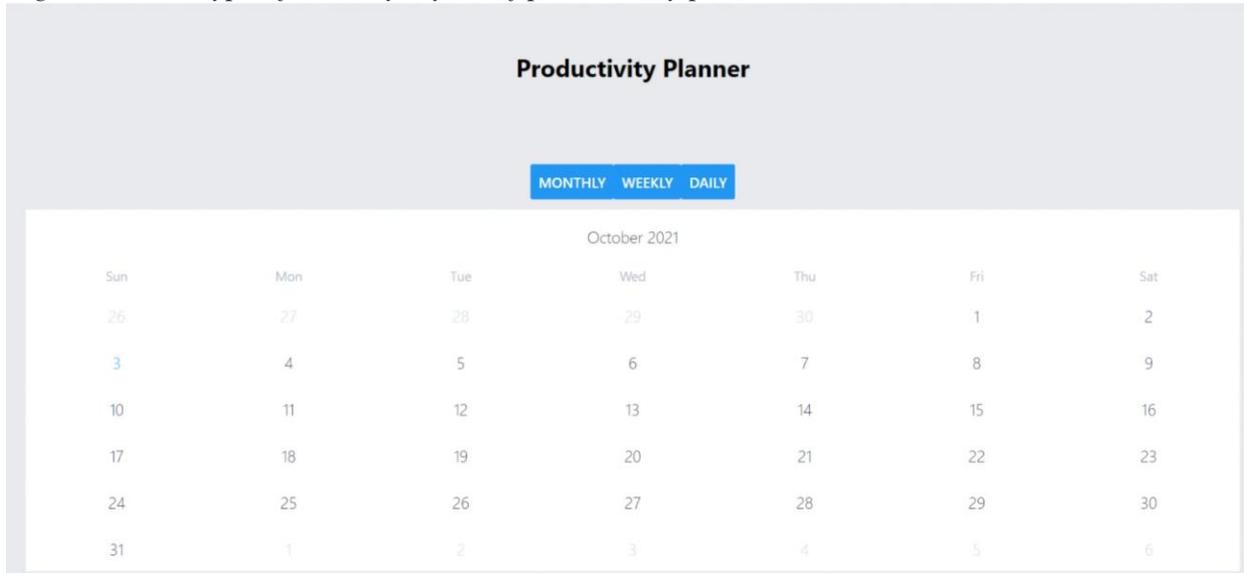
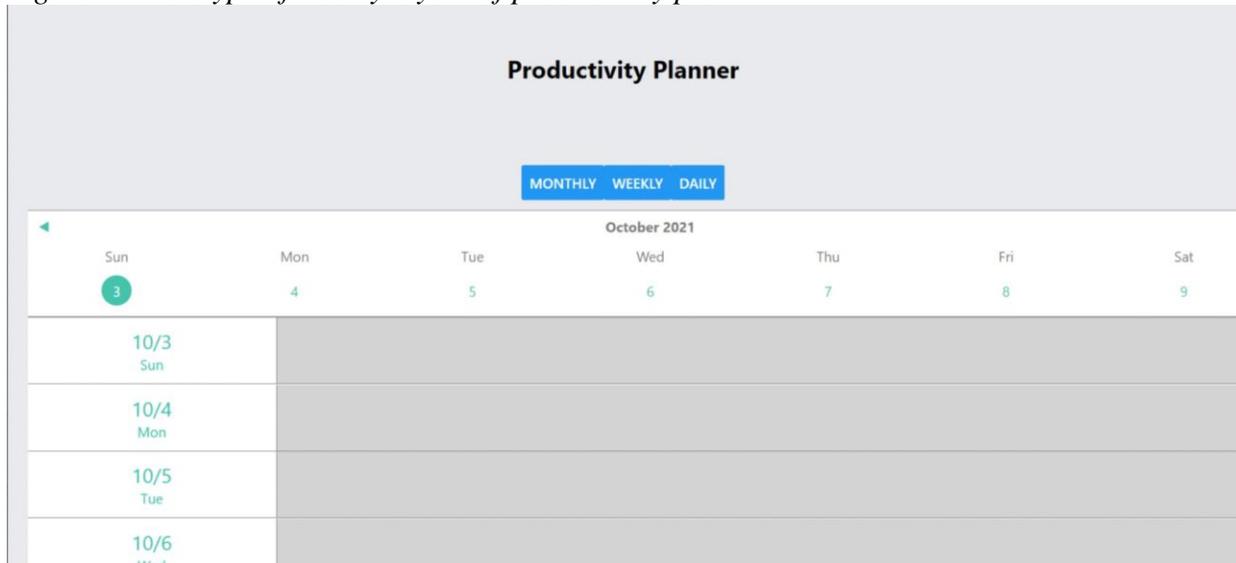
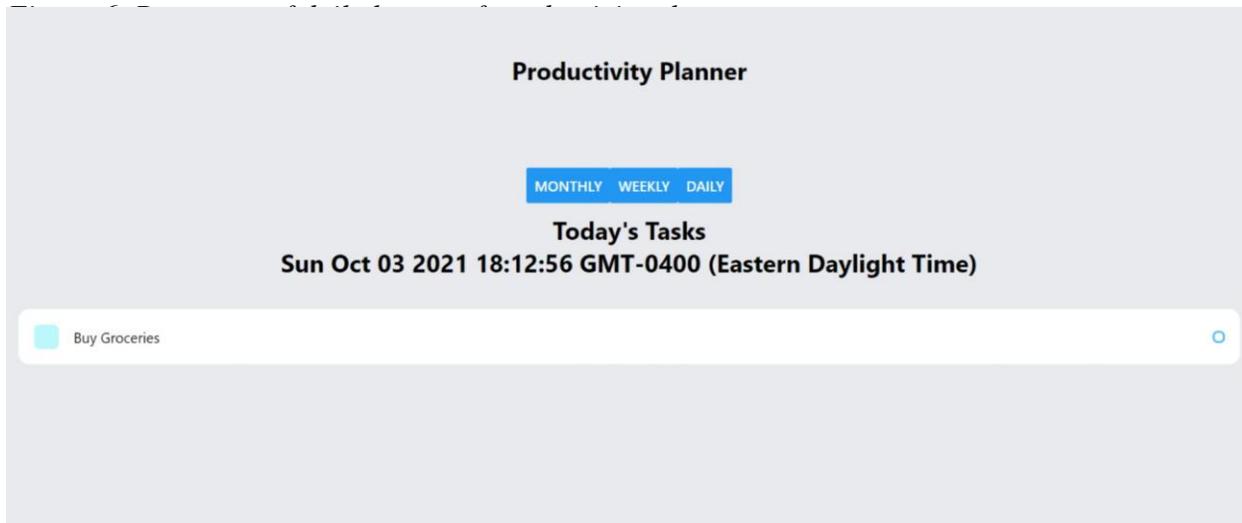


Figure 5. Prototype of weekly layout of productivity planner.





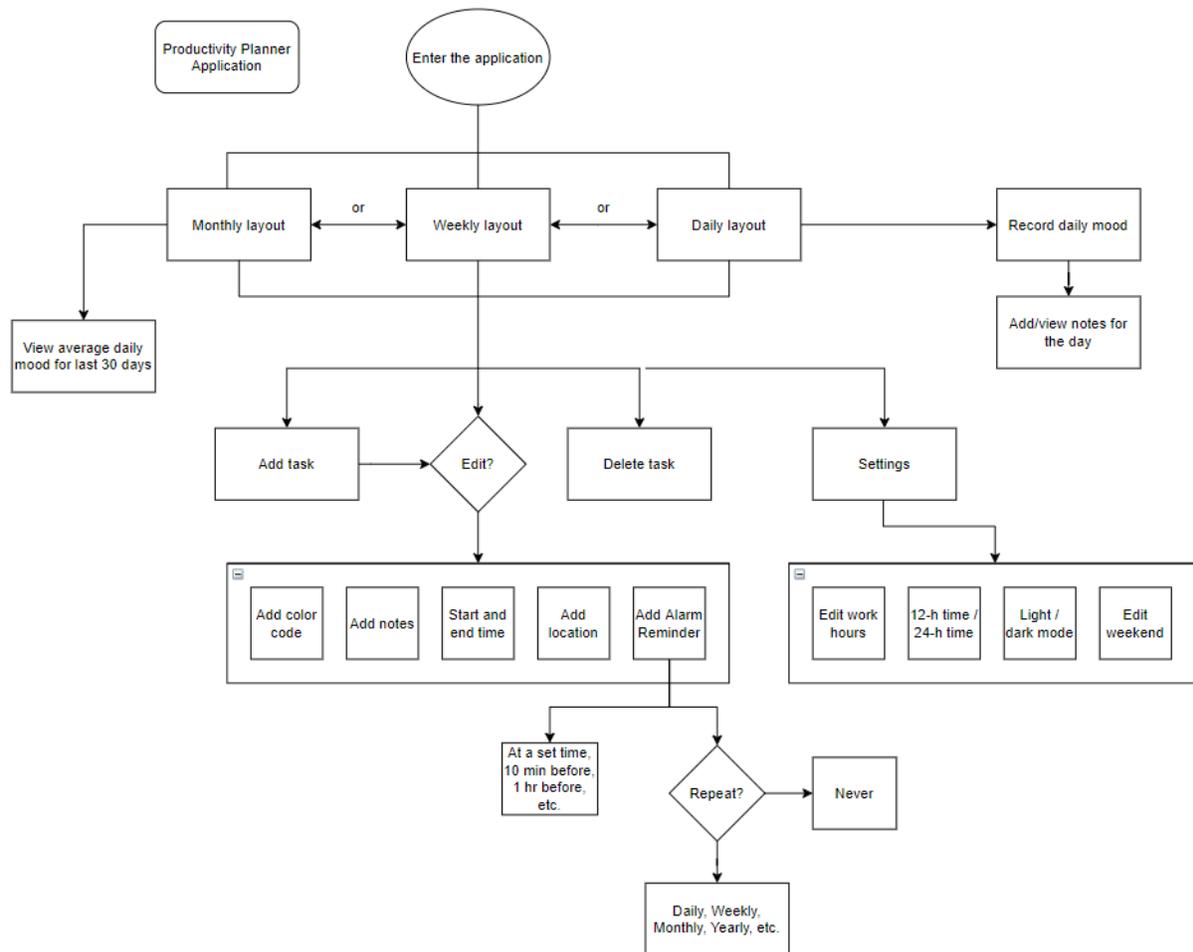
### 3.1.1 Subsystem 1 - Aesthetics

Figures 1, 2, and 3 show the general aesthetic and organization of the productivity planner. Each layout provides access to layout navigation buttons, as well as the current month and year. Unique tasks in the daily layout are colour-coded. Figures 1-3 are only prototypes of the aesthetic at the moment, not functionality.

### 3.1.2 Subsystem 2 - Functionality

Figure 4 (below) is a prototype of the functionalities of our productivity planner. As soon as the user opens the application, they must choose a layout to view. From the monthly layout, the user can view their average daily mood (from the reaction option in daily layout) over the past 30 days. From the daily layout, the user can record their daily mood and add/edit notes. Furthermore, from all layouts, the user can add/delete/edit an event and access Settings. In settings, the user may edit his/her work hours to start/end at different times than the default 9:00 AM - 5:00 PM. The user may also change time formats, light/dark mode, and weekends (for example, from Sat./Sun. to Fri./Sat.). By selecting 'Edit', the user is given the option to change the colour of an event block, add a description, set the location and start/end times, and to set reminders. These reminders are optionally repetitive and can be set to notify you a certain amount of time before the event.

Figure 7. Prototype of the functionality of the productivity planner.



### 3.1.3 Critical Product Assumptions

In developing the detailed design concept and first prototype, the following critical product assumptions have been made:

- The user can easily understand the user interface and how to use standard app functions
- The user has a 2-day weekend
- The user only has 300MB of space for the productivity planner app
- The user only plans to use the app on iOS devices
- The user needs a way to organize tasks
- The user needs task reminders

- The user is able to install and use iOS applications
- Some tasks will have to be color-coded differently depending on the task
- The user plans to use 3 views: Monthly, Weekly, and Daily

## **3.2 Prototype 1**

In the first prototype, UI screens were created with various functions and components leading to other screens.

The objectives for prototype 1 were:

- Create a proof of concept for the productivity planner
- Create a skeleton version of the app with possible UI screens
- Link the UI screens together
- Determine subsystem functionalities that will satisfy the client's needs

### **3.2.1 Prototype testing**

The first prototype for the productivity planner was created using React Native, which is a derivation of ReactJS. Its main purpose is to create efficient, effective, and aesthetically pleasing android and iOS applications for users using JavaScript, and variations of HTML and CSS. The first prototype was tested by selecting a wide array of criteria both from our software-perspective judgement and the needs of the client through their respective statements with our two meetings with them. These criteria were then translated into various metrics, ranging from aesthetic based metrics to functionality based ones. Consequently, these metrics allowed us to accurately measure if our application would satisfy the requirements of the client. With reference to Table 2, the results of testing for Prototype 1 is shown below:

Table 1. Prototype testing results compared to target specifications

#	Metric	Expected Result	Actual Result
<b>Functional requirements</b>			
1	iOS platform	Yes	Yes*
2	Push notifications	Yes	No
3	Color coded layouts	Yes	Yes
4	App reminders	Yes	No
5	Checklists	Yes	Yes
6	Offline functionality	Yes	No
7	Multiple layouts	Yes	Yes
<b>Non-functional requirements</b>			
8	Simple user interface	Yes	Yes
9	Aesthetics	Yes	Yes
10	Time to open app	< 8 sec	N/A**
<b>Constraints</b>			
11	Storage size	< 300 MB	N/A**

\*App will work for those in possession of source files. If permission is granted, the app will be published on the Apple App Store and will be available for all iOS users.

\*\*Since this is the first prototype, these metrics will not be considered for it.

The main purpose of our first prototype is to solidify the client's aesthetic vision of the productivity planner, and to map out the features that the application needs in order to be successful for the client. As a result, for this prototype, the functionality for most of the features have not yet been implemented, which explains why this prototype falls short in some of the metrics, such as offline functionality and notifications and reminders. However, this does not

mean that the design of our prototype was created in vain, since in the case of this project, the ideation and planning aspects of the productivity planner should be adequately mapped out, and only then can the functionality be layered on afterwards. Ultimately, the prototype did meet the expected metrics, due to the reasoning behind it, which is to once again verify the general and specific features of the application with the client before implementing these ideas concretely in the form of React Native code.

## **4 Client Meeting #3 Outline**

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For the next meeting, the team will present the detailed design concept and first prototype to the client. Since this detailed design concept was based on their needs and improved from their concerns given during the last meeting (Client Meet 2), additional feedback will be requested. After presenting the detailed design concept and prototype, the following questions will be asked:

- What do you like about the prototype?
- What are some things you don't like about the prototype?
- Is the structure of the app user friendly?
- How can we make this app more user friendly?
- Are there any aspects of the design that you feel we have overlooked?

## 5 Bill of Materials

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Table 2. Projected Bill of Materials for the Final Prototype

Part Name	Description	Quantity	Unit Cost	Link
Apple App Store Publish Fee*	Fee to publish an app on the Apple App Store	1	\$125 CAD (\$99 USD)	<a href="#">App Store - Developing for the App Store - Apple (CA)</a>
React Native	Mobile development framework using Javascript	1	Free	<a href="#">React Native · Learn once, write anywhere</a>

\*If our client requires the Productivity Planner app to be published on the App Store, we will need to pay a fee of \$99 USD. However, if our client is satisfied with having a fully-functioning prototype that is only available to those who have the associated file set, then we will not need to purchase anything or pay any fees.

## 6 Conclusions and Recommendations for Future Work

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During the second meeting with the client, the group conceptual design was presented to the client. Feedback gathered from the client during this meeting was used by the team to develop a detailed design concept and the first prototype of the productivity planner. The prototype was also tested against the target specifications. The results of the detailed design concept and prototype will be presented to the client in the next meeting. A bill of materials was also prepared to identify necessary software and materials needed to complete the final prototype.

Recommended future work consists of getting client feedback on the prototype and iterating on the current product design. For prototype 2, the team will continue to design, program and test the various subsystems identified in the detailed design concept, as well as develop and look for areas where other systems could be developed in order to best satisfy the client's needs.

## 7 References

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Pariso, Maxine Builder and Dominique. “The Best Planners, According to Productivity (and Stationery) Experts.” *The Strategist*, 21 July 2021, [nymag.com/strategist/article/best-planners-according-to-productivity-experts.html](https://nymag.com/strategist/article/best-planners-according-to-productivity-experts.html).

“Productivity Planner.” *Intelligent Change*, [www.intelligentchange.com/products/the-productivity-planner?view=b](http://www.intelligentchange.com/products/the-productivity-planner?view=b).

P-Themes. “LUX pro A5 (Turquoise).” *LUX PRODUCTIVITY*, [luxproductivity.com/collections/all-lux-pro-a5/products/lux-pro-a5-brown](http://luxproductivity.com/collections/all-lux-pro-a5/products/lux-pro-a5-brown).

“You Have a Goal, We Have a Plan. .” *Plan*, [getplan.co/login](http://getplan.co/login).

# APPENDIX 1: Project Plan Update (Wrike)

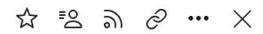
<https://www.wrike.com/workspace.htm?acc=4975842&wr=20#path=folder&id=758824426&c=1ist&vid=47238949&a=4975842&so=10&bso=10&sd=0&st=nt-1>

## Planning

The screenshot displays the Wrike Planning board interface. At the top, there is a navigation bar with a search bar and user avatars. Below this, the board is titled "Planning" and includes a filter for "All tasks" and a view selector set to "Board". The board is organized into five columns: "New (2)", "In Progress (1)", "Completed (2)", "On Hold (0)", and "Cancelled (0)". Each column contains a "New task" button and a list of tasks with their respective assignees and due dates.

Column	Task Name	Assignee	Due Date
New (2)	Division of Tasks for Prototype	HS	13 Oct
	PD G: Business model and economics report	LK	18 Nov
In Progress (1)	PD D.1.8: BOM	GK	7 Oct
Completed (2)	PD A.3: Project skeleton	HS	16 Sep
	PD C.2: Project plan	DV	30 Sep
On Hold (0)			
Cancelled (0)			

## PD G: Business model and economics report



Planning +

New ▾

**LK** Lisa K. +

#765869164 by Hafsa S. on 30 Sep

11–18 Nov (8d) Approvals 0:00 2 subtasks Attach files 2 dependencies 8

**PH** Business model 15 Nov **New**

**HS** Economics report 18 Nov **New**

+ Add task ▾

Business model and economics report



Today

**DV** **Dhwani Vaishnav** 9:48 PM  
Rescheduled task for 11–18 Nov (8d)

**DV** Add a comment...



*Added subtasks, task responsibilities, milestones for Planning*

# Monitoring and Control

The screenshot displays a Kanban board for a project named "Monitoring and Control". The board is organized into five columns representing different stages of task completion: "New", "In Progress", "Completed", "On Hold", and "Cancelled". Each column contains a list of tasks, each with a title, a status indicator (represented by a colored circle with initials), and a due date. The "New" column has 11 tasks, "In Progress" has 2, "Completed" has 3, "On Hold" has 0, and "Cancelled" has 0. The interface includes a top navigation bar with a search bar and a user profile icon, and a bottom navigation bar with a filter dropdown set to "All tasks" and a "By priority" dropdown.

Column	Count	Task Title	Status	Due Date
New	11	Building of Prototype Quality check	KJ	31 Oct
New	11	PD E quality check	PH	11 Oct
New	11	PD E project plan update	HS	9 Oct
New	11	PD F quality check	DV	16 Jan 2022
New	11	PD F project plan update	KJ	14 Dec
New	11	PD G quality check		
In Progress	2	PD D quality check	GK	13 Oct
In Progress	2	PD D project plan update	LK	7 Oct
Completed	3	PD A quality check	GK	16 Sep
Completed	3	PD B quality check	HS	23 Sep
Completed	3	PD C quality check	DV	30 Sep
On Hold	0			
Cancelled	0			

**PD G project plan update** ☆ 👤 📡 🔗 ⋮ ✕

Monitoring and Control +

☐ New ▾ PH Patrick H. + #765869156 by Hafsa S. on 30 Sep

📅 19–28 Nov (10d) ⌚ Approvals ▶ 0:00 🗂 Add subtask 📎 Attach files 🔗 1 dependency 🔄 8

**Predecessors**

LK PD G: Business model and economics report Finish to Start ▾  
 11–18 Nov (8d)

+ Select task

**Successors**

+ Select task

Click to add the description

---

DV  📎 @ 😊 Aa

*Example of dependency added in Monitoring and Control*

# Initiation

The screenshot displays a project management interface for a board named "Initiation". The top navigation bar includes a search field and a user profile icon labeled "DV". Below the board title, there are view options: List, Board (selected), Table, and Gantt Chart. A filter dropdown is set to "All tasks" and sorted by "By priority".

The board consists of five columns:

- New (0)**: Contains a "+ New task" button.
- In Progress (0)**: Contains a "+ New task" button.
- Completed (1)**: Contains a "+ New task" button and a task card for "PD A.1: Team contract" with a priority indicator (PH) and a due date of "16 Sep".
- On Hold (0)**: Contains a "+ New task" button.
- Cancelled (0)**: Contains a "+ New task" button.

**! PD A.1: Team contract** ☆ 👤 📌 🔗 ⋮ ✕

Initiation +

---

**Completed** PH Patrick H. + #765869143 by Hafsa S. on 30 Sep

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12-16 Sep (5d) Approvals 0:00 Add subtask Attach files 1 dependency 8

---

Team contract:  
Contract Template provided on Brightspace.Team\_Contract\_GNG2101.docx attachment in deliverable A submission folder

The contract should outline the team's procedures, expectations and consequences for failing to follow procedures and fulfill expectations.  
Individual members must show their understanding of these statements and their agreement to follow them by applying their signature to the contract.  
**\*\* Files needed are attached below**

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▽

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DV   Aa

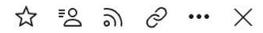
*Example of notes added in tasks*

# Execution

The screenshot displays a project execution board with a dark teal header. The header includes navigation icons (home, search, add, help, user), a search bar, and a user profile icon labeled 'DV'. Below the header, the board title 'Execution' is shown with a 'Shared' status and a 'Board' view selected. The board is organized into five columns: 'New' (5 tasks), 'In Progress' (1 task), 'Completed' (7 tasks), 'On Hold' (0 tasks), and 'Cancelled' (0 tasks). Each column has a 'New task' button at the top. The 'New' column contains tasks: 'Building the prototype' (PH, 7 Oct), 'PD E: Project progress presentation' (KJ, 10 Oct), 'Client meet 3' (LK, 29 Oct), 'PD F: Prototype 2' (PH, 4 Nov), and 'PD H: Design day' (PH, 13 Nov). The 'In Progress' column contains 'PD D: Detailed design' (DV, 12 Oct). The 'Completed' column contains: 'PD B Submission' (KJ, 23 Sep), 'PD A.2: Client meeting preparation' (DV, 16 Sep), 'PD A submission' (LK, 16 Sep), 'Client meet 1' (KJ, 17 Sep), and 'PD C: Concepts' (GK, 30 Sep). The 'On Hold' and 'Cancelled' columns are currently empty.

Column	Count	Task Name	Assignee	Due Date
New	5	Building the prototype	PH	7 Oct
New	5	PD E: Project progress presentation	KJ	10 Oct
New	5	Client meet 3	LK	29 Oct
New	5	PD F: Prototype 2	PH	4 Nov
New	5	PD H: Design day	PH	13 Nov
In Progress	1	PD D: Detailed design	DV	12 Oct
Completed	7	PD B Submission	KJ	23 Sep
Completed	7	PD A.2: Client meeting preparation	DV	16 Sep
Completed	7	PD A submission	LK	16 Sep
Completed	7	Client meet 1	KJ	17 Sep
Completed	7	PD C: Concepts	GK	30 Sep
On Hold	0			
Cancelled	0			

## PD F: Prototype 2



Execution +

New ▾

**PH** Patrick H. +

#765869141 by Hafsa S. on 30 Sep

28 Oct – 4 Nov (8d) Approvals ▶ 0:00 2 subtasks Attach files 2 dependencies 8

>  **HS** Prototype 2 2 Nov **New**

**LK** Testing 4 Nov **New**

+ Add task ▾

Prototype 2



Today



**Dhwani Vaishnav** 9:55 PM  
Rescheduled task for 28 Oct – 4 Nov (8d)



Add a comment...



*Example of subtasks added in Execution*

# Closing

The screenshot shows a project management interface for a board named "Closing". The top navigation bar includes a search field and a user profile icon labeled "DV". Below the board title, there are view options: "List", "Board" (selected), "Table", and "Gantt Chart". A filter dropdown is set to "All tasks" and sorted by "By priority".

The board is organized into five columns, each with a "New task" button:

- New (2)**: Contains two tasks:
  - PD I: User manual (Priority: PH) due 3 Dec
  - PD J: Final presentation (Priority: HS) due 13 Dec
- In Progress (0)**: Empty column.
- Completed (0)**: Empty column.
- On Hold (0)**: Empty column.
- Cancelled (0)**: Empty column.

**PD I: User manual** ☆ 👤 📶 🔗 ⋮ ✕

Closing +

☐ New ▾ PH Patrick H. + #765869126 by Hafsa S. on 30 Sep

📅 5 Dec (1d) ✓ Approvals ▶ 0:00 🗂 Add subtask 📎 Attach files 📌 1 dependency 🗨 8

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User and product documentation and video pitch 🔍

---

Last week

HS **Hafsa Salad** 1 Oct  
Rescheduled task for 3 Dec (1d)

Today

DV **Dhwani Vaishnav** 10:09 PM  
Rescheduled task for 5 Dec

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DV  📎 @ 😊 Aa

*Example of rescheduling tasks based on new timelines*