I.   Introduction

For our project we looked at three different time management tools: Notion, Google Calendar, and physical planners. We also interviewed students and compiled their thoughts on different types of tools. Based off those assessments and interviews we compiled the best features of time management tools in order to create our own tool that would best suit a student's needs.

II.   Assesment of Other Time Management Applications

A. Notion

Notion is a web and mobile application used to organize notes and compile to do list. When you first start with notion you are given a blank page where you are given the ability to add to do list or insert subpages for note taking etc.

The user has the ability to design their pages based on their own individual tastes. Templates are available on the website to help users get started. These templates include layouts based around different users, some are formulated for students while others are formulated for organizations to organize and give out tasks. You can embed multiple different widgets in Notion including some for music like a spotify widget. Another plus about Notion is the ability to embed different applications like Google Drive. Besides embed there is the multiple text features that you would find in Word or Google Doc such as: headings, dividers, tables, etc. Other unique features include the ability to embed code which allows you to customize your page with unique features like a pomodoro timer, your Google Calendar, etc. Users can add Icons for pages as well as header photos in order to further customize.

The difficulty of notion, however, comes from the multiple features available to customize. Starting with a blank page makes it difficult for users when first beginning with the application. It isn't exactly obvious the extent to which you can take advantage of notion features. For example, if you are a user with no coding knowledge, without a guide or existing template you wouldn't know how to include features like a timer or calendar. There is definitely a learning curve in addition to the commitment it takes to finalize your page to your liking. Because it isn't so straightforward, users complain that customizing your page takes up the most time. Time that could be spent actually completing the assignments whose info you're trying to organize on a page. The plus of Notion, however, comes when your page(s) are complete and you have the ability to have all of your school items in one place versus across multiple applications. It is a application that is useful for users that struggle with remembering tasks and assignments because the info is spread across multiple pages. It's a unique way of organizing and converging different streams of information, but that positive is dependent on how comfortable that user becomes with Notions different capabilities.

B. Google Calendar

Google Calendar is a web and mobile application that functions as a calendar- can be used to organize different tasks and time-block. It has the ability to sort blocks into different types (E.g. tasks vs. events. Vs. birthdays. Vs. holidays). There is also the ability to import from other calendars (E.g. different emails, organizations). Google Calendar has different calendar views like schedule view: vertical infinite scroll, day, 3- day, week, and month. Other functions include: Search function and Go-to-today button. There is also the option to add blocks (Event vs. task vs. working location vs. out of office) and edit blocks (drag and drop). You can edit multiple aspects of the calendar including the time, guests, location, notification settings, color, and description of calendar events. More customization options are the colors of events, size of time increments, and event illustrations (E.g "dinner" automatically creates a food banner).

The Pros are the customization. Everyone has a different way of organizing their events/tasks etc. as well as different preferences for how they want this information to be presented to them. This application gives the user a wide range of options- switching between different options is additionally very easy. It is Intuitive, there is simple navigation. For both web and mobile views, the existence of the sidebar/main menu prevents too many options from being in view at once, preventing information overload. The application does very well in responding to mobile interface in a way that is convenient and accessible for mobile devices (E.g. add event at bottom right corner, limited navigation). Another pro is connectivity: the ability to import from other calendars and individuals via email enables the user to keep track of group events- very common in school and work life.

One downside is that to-do list is not as intuitive as the standard checkbox : the list template that is familiar. Another is task functionality. Tasks cannot be marked as in progress and sometimes tasks do not have a set time, they just need to be done at some point. Because both calendar events and tasks are important to see at all times, separating via a filter function might not be the best. Perhaps the solution would be separating tasks from the calendar?
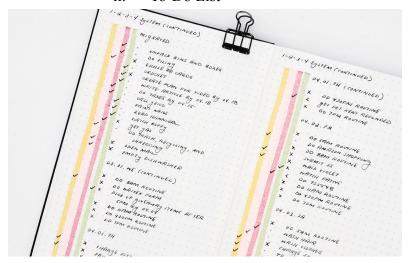
C. Analog: A Written Planner

The General Use Case for an Analog option of time management is a physical notebook that can be edited and customized with writing tools, following a general template that structures times. Tools can include a journal, pen, pencil, color pens, color pencils, highlighters, stickers, ribbons, rulers, and/or online templates. Structures can include a time table or to do list, pictured below:

       i.   Timetable:

ii.   To-Do List

The Positives include tactile experience and customization. With tactile experience students are able to touch, feel, and interact with their planner by physically altering it, leading to a more connected experience to the product. With customization: If students purchase a blank journal, then students are able to fully customize the time management system used, as well as other design elements. If students purchased a journal with planning elements, they are able to embellish the journal with other design elements. Other design elements include fun designs, custom color-coding, texture-coding (highlighter vs pen), and accessories (stickers, ribbons). Another positive is being free from digital distractions: students who have trouble focusing on the computer might benefit from having to refer to a time management tool that is offline. Conversely, they are able to use it even if their devices run out of battery or signal/wifi.

Negatives include the lack of automation: the analog planner is unable to send digital reminders or set alarms that interrupt your flow of life. It also lacks the ability to automate recurring tasks (eg. if you have office hours for a class every week, you'll have to log that in manually). There is also lack of set design template: having to customize the design template independently might lead some less design-savvy students to end up with an interface that is not as useful or easy to use. Lastly a negative is physical space: the notebook will add weight/volume to a student's busy life, meaning that the student will have to always carry it around, or go without it if the physical item is forgotten.

D. User Interviews

Alicia is a 3rd year with a triple major, she is also apart of multiple organizations with executive positions in most of them. Because of her busy schedule she prefers Google Calendar for all her scheduling needs to organize when she has meetings and class. She uses Notion for other time management needs like organizing tasks and assignments. She loves the look of Notion when layouts are complete . She notes that it is hard to keep up with aesthetic of it and it takes a lot of time to organize everything to your liking while deciding composition, color, and theme.Because the layout is completely customizable to the user, the realm of possibility makes it difficult to focus on time management as you get caught up in the designing of it all.

Hashi is also a third year and utilizes Notion to organize all her student responsibilities. For Hashi, Notion is her favorite application. She has a whole notion set up that has everything she needs for time management. She has features that help her organize the urgency of her tasks and take notes for classes all in one place. Her favorite aspect of Notion is being able to keep every aspect of her student needs in one place. You can take notes, write to do lists, and embed a calendar whereas with other time management applications note taking is often done in a separate space and to do lists are separate as well, as is the case with using Google Calendar.

Arely Perez is a 3rd Year Psychology Major. Her Tools include a To-do lists (physical planner). Within the lists she has multiple different lists for different things (e.g. club vs. school vs. day). With a planner she feels accomplished by crossing things off. Another tool is Apple calendar. She uses Calendar to remember meetings with other people. With Calendar she enjoys the convenience of the widget on her homescreen. She doesn't like the format and layout of google calendar. She also uses Google Sheets to look at class schedule, what classes she has for the day, and work schedule. It's for things that are set in stone. Lastly, she uses her phone alarm for random things to remember (e.g. setting an alarm for 5 min before a meeting starts or to double check an assignment). Some notes from this interview is that she has a lot of different tools for niche things and does things mostly because that's the way she's always done it. Everyone has a different way of keeping track of things, multiple different combinations of things: flexibility and customization is important to note!

Josh Garland is a 3rd Year Poli Sci Major. They prefer Google Calendar.
For them it is nice to have everything laid out in one place. With Calendar they are able to send reminders and have things automated. It can also be collaborative (add people to events). They

previously tried using a journal. Its difficult because you have to hand-write everything and he is not very design-inclined.

      E. Takeaways

Based of interviews and research we discover that personalization and customization is very important. Since everyone has different features that they favor for time management as well as different aesthetic, having some sort of customization process in the application is important. That is the best part of Notion is being able to customize it, but in order to minimize the negatives of that option we would need to offer a customization process that is more straight-forward and less learning intensive. We also see that inclination for creativity with a planner and we see how Google Calendar is somewhat limiting in terms of customization that is unique for each user. Overall, it should be visually clean and appealing automatically and teh customization process shouldn't be too time or learning intensive for the user.

Another important aspect is the convenience and automation. For users, having the ability to set reminders is helpful and making sure all of these processes are simple is key. Having too many options and customizations might make it too complicated so having an automatic template that people can use but customize would be helpful. There is also some autonomy in that process which users love, but not too much autonomy where they would feel overwhelmed by the information overload.

Keeping all this in mind we decided to go with a Web application. There would be widgets including a calendar, To-Do lists, notepads, and timers that one could add to their page. The calendar would include the option for notifications and would have the ability to make an event recurring. The to-do list would also have notifications as well as the ability to check off tasks, tag tasks by urgency, include filters, and add multiple to-do lists. The notepad would allow users to write reminders or ideas down and the timer could be used for users that enjoy timers to space out the amount of time spent on tasks. All of these widgets would be able to be added or removed based on your own time-management needs. For customization, we could add "analog" design elements (highlighter pens, stickers etc.). We also considered including a toggle between to-do list and calendar view and including the option to have it 'all in one place" where you could can also take notes on the app and add different pages for different areas of life like School, Work, Home-life. We also considered expanding on its usability: there would be an option to add collaborators so that it can be utilized for clubs or between roomates for house tasks. Further customization would come from being able to add images.