

Competitive and Inspirational Alternatives

Uninitialized Local Team

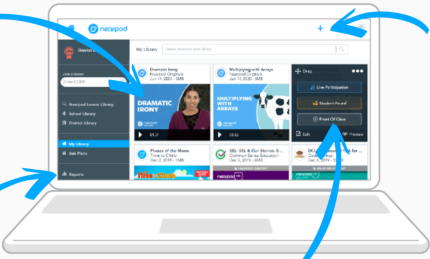
Kaveh Buenaventura, Angela Ferro Capera, Jason Dekema, Ian Dudder, Kez May, Hailey Schauman

This document contains each team member's competitive and inspirational alternatives analysis. Some analyses are longer than 1 page because the competitive solution inspired the team with great ideas to incorporate into our solution.

Nearpod by Angela

Nearpod helps instructors make their lessons more interactive (asynchronous, virtual, or live). A teacher can create interactive presentations containing quizzes, Polls, Videos, Collaborate Boards, and more. Students have a greater opportunity to engage with the lecture, answer questions, provide instructors with feedback, and fill out worksheets professors have provided and save them into their drives so they can study them later.

The only dashboard you need for interactive instruction



Use Nearpod for:

- Your whole lesson
- A video **NEW!**
- Quick formative assessment
- Gamified activities

Convert your:

- PowerPoint
- Google Slides
- PDF
- YouTube video **NEW!**
- Video file **NEW!**

OR

Save time:

15,000+ premade, interactive lessons & videos **NEW!**

Review student work:

Post-session reports

Teach three ways:

- Live Participation
- Student-Paced
- Front of Class **NEW!**

P.A.C.T Analysis

Personas: The target audience for this application is professors, students, and institutions. The application aims to help remote learning be more interactive.

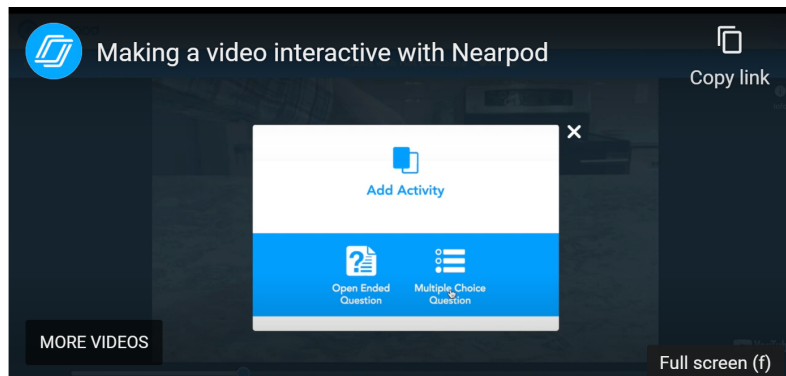
Activities: The application supports instructors to teach more engaging and interactive classes. It allows instructors to virtually teach live or to pre-record their lessons. As for students, it keeps students more engaged with their virtual lectures, whether they are live or pre-recorded.

Context: The main purpose of this app is to be used for educational purposes. Schools and colleges can use it as an extension to the existing learning management app they could be using.

Technology: It relies on an internet connection, access to a computer that supports Zoom, Google Chrome, and other apps.

What inspired me from the site?

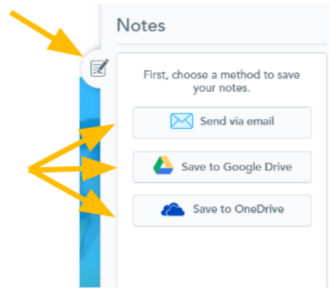
- The ability to have interactive videos: Professors can upload their own personal lessons, or any lessons on YouTube and make them interactive by adding questions to the lesson at certain points of the lecture.



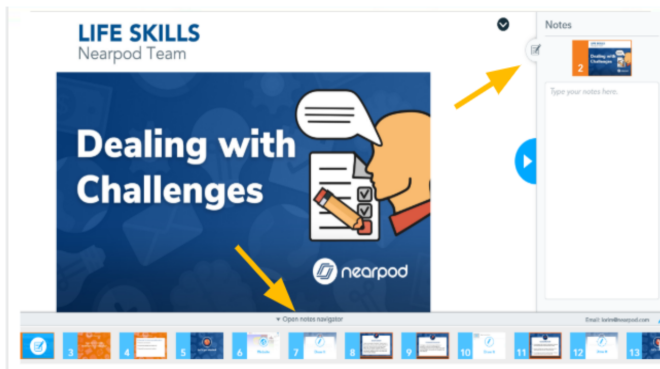
- **Nearpod Live Participation + Zoom integration**
 - Teachers have all the functionality of Zoom and Nearpod, with the additional ease of students being able to join both with one code/link.
 - Students are able to launch Zoom directly after joining their Nearpod lesson.
 - **Teacher view**
 - They just launch their session on the home page of the course they are teaching, and Zoom generates the lesson automatically.
 - Professors can have the waiting room enabled/disabled.
 - **Student view**
 - The student logs into their account only once, then they click in the lesson generated by the instructor, and they are taken to the Zoom meeting.
 - **Nearpod and Canvas Integration**
 - Teachers can integrate Nearpod into their lessons (asynchronous or live) and make them more interactive.
- **Students Notes Feature**
 - Professors can fill their presentations with images and/or worksheets for students. Students can use the Students Notes Feature to save the presentation to their drive to access the information later.

How students take notes during a lesson

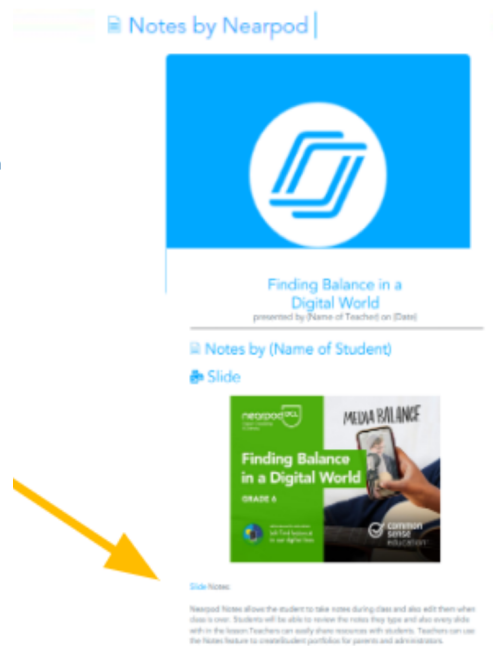
1. During a Live Participation or Student-Paced lesson, students select the Notes icon in the top right corner. They can share the Notes to themselves via email, Google Drive or OneDrive.



2. Throughout the lesson, Open the Notes Navigator to type notes on a slide. This will be automatically saved and shared to the email or drive location chosen when the lesson is over.



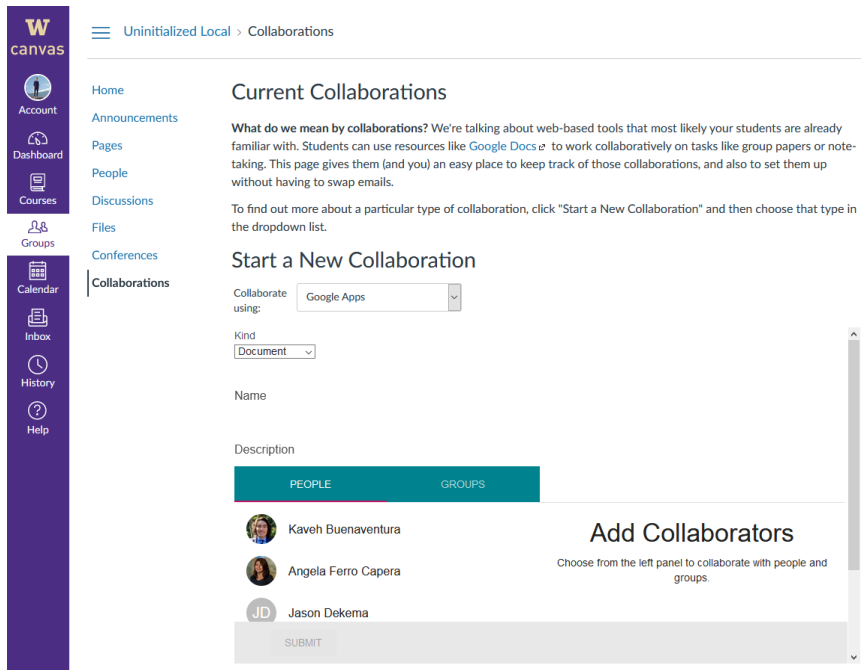
3. After the lesson is over, go to the email or drive to access the lesson Notes. You will see all slides, media content and interactive activities from the lesson.



Canvas Groups by Ian

General Description

Canvas is the one of the most popular applications for online classes. It does an excellent job providing a means to post course resources and allow assignment creation and submission. However, it also offers a “Groups” page, which is a feature that is largely overlooked and underused.



PACT Analysis

P - People: The people this application serves are students and instructors, although the Canvas Groups page is made more for student-use than instructor-use.

A - Activities: Professors can create the group and post course resources. Students can send announcements to the group to send a notification with a message; create a new

page with a title, description, and due date; start new discussion threads; and upload up to 1 gigabyte of files. Additionally, students can create a “Conference” which links to another application called “BigBlueButton” which allows students to run an online call with voice chat, webcam, screen sharing, and breakout rooms. Lastly, students can use the “Collaborations” page to create and share a new Google Doc with selected team members.

C - Context: The context for using this application is a class setting. This means the group will consist of students working on a project that is defined by the instructor.

T - Technologies: Canvas has itself implemented the announcements, pages, discussions, and files, all of which are storage technology. It also relies on Google Docs to fulfill its “Collaboration” feature and BigBlueButton to fulfill its “Conference” feature. Furthermore, Canvas exists as both a web application and a mobile application.

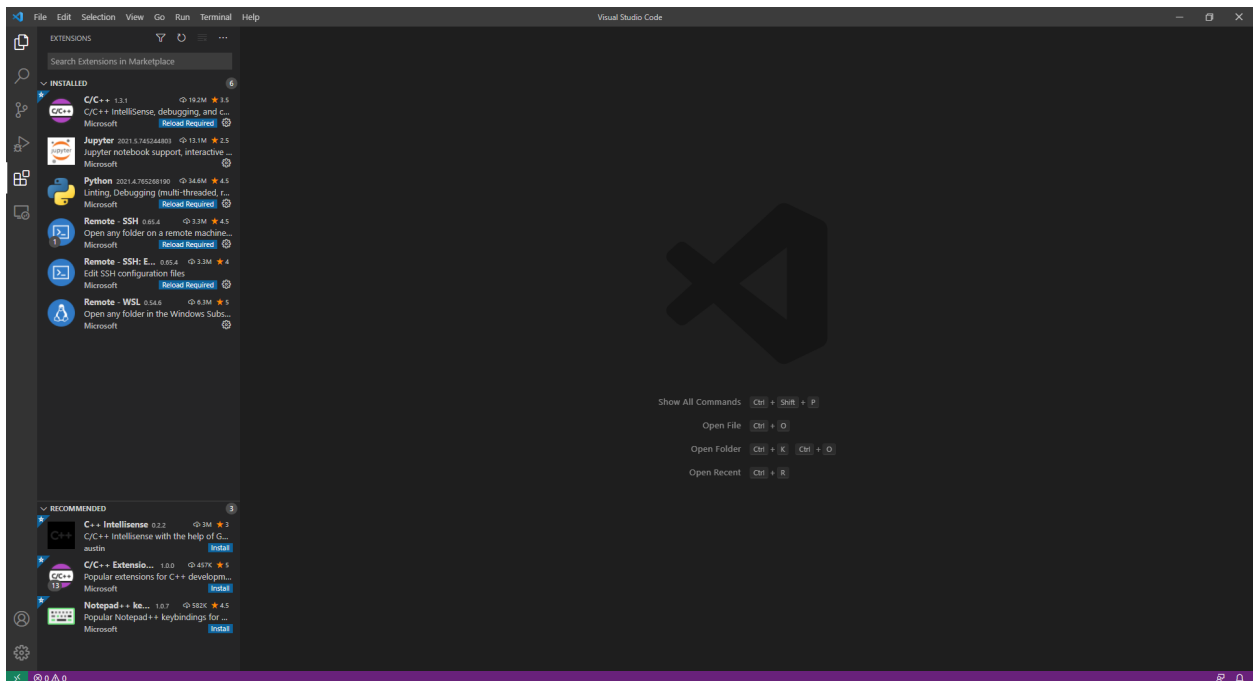
Inspirational Aspects

The first aspect that we might be able to include in our own application is different types of group messaging. The three communications that Canvas offers are the announcements for urgent notifications, pages to save information, and discussions to allow direct team member communication. The main takeaway here is that there are different ways a team can interact. In our own application, we could have a similar announcements feature to send a notification to team members as well as a discussion page to let students make decisions and collaborate. However, something our application could include that Canvas lacks is a direct communication system right on the group page to allow students to send private messages to one another.

A second aspect that Canvas has that we can use and modify is the file storage system and collaboration feature. This is a weak point in Canvas's application. It only supports up to 1 gigabyte of file storage and has to link to an external application (Google Docs) to fulfill live collaboration. Our application could include these features, but allow a much greater storage size and allow the live file editing within our application.

Lastly, the "Conference" feature could be implemented in our application as an in-app voice call service. We could improve on Canvas's implementation by providing the service ourselves rather than linking to a separate application to do it for us.

VSCoDe by Kaveh



PACT Analysis:

People: The people who use this application are generally programmers. There are subsets of programmers whether they are students working on personal projects or homework assignments, or commercial workers working on some sort of software as a job.

Activities: Users can add different types of features for VSCode via their extension system. With these extensions, VSCode is a customizable IDE for many different programming languages or purposes. Users can also use built in version control features without solely using the command line or 3rd party git service. This application also includes vital and quality of life features for programmer use including built in terminal, debugging, auto-formatting, and customizable keybindings.

Context: There exists a few contexts for this application including the classroom setting, home/personal setting, and company setting.

Technology: VSCode is a web application that comes as a single piece of software. Extensions that can be downloaded are found within the applications extension library with built in reviews. There isn't much setup needed for basic source code editing, but since it is a highly customizable application there are opportunities to set it up to the user's personal preferences.

Design Inspirations:

One major design inspiration that we can leverage from VSCode is its extension services. Our project is dependent on being highly customizable to the users preferences. We plan to provide an extension based service so that the users may incorporate the collaboration tools that they want into their application. VSCode does this extension service well and is a reason why it's one of the most popular code editors on the market.

Another design we could use is the built in version control system. However, we do want this application to be used by all different types of collaborators and not just programmers. In this case, rather than using specifically git, we could implement a basic version control service that applies to any type of document. Extensions could be included for incorporating git functionality.

The last design inspiration from VSCode is based more on its technical implementation. It is extremely lightweight as an editor compared to IDE with fast response times in comparison. As such we can leverage this type of lightweight, extension-based design to our own project so that our application has fast response times as well. This is quite important with collaboration in order to keep pace with edits.

Google Suite by Jason



PACT Analysis

- **People:** The wide variety of tools and applications available with G Suite means that it can be difficult to pin down any common trait between users. Therefore, the designs need to be as uncomplicated and straightforward as can be.

- **Activities:** Many of G Suite's users use it very frequently, and for long periods of time. Availability of the site, as well as reducing lag, need to be prioritized for this reason. As people store all sorts of files on it, they expect to be able to access those files at any time.
- **Context:** People could be using G Suite in anywhere from a busy classroom, full of students, to on their phone while riding a crowded bus, to at home, alone in a quiet room.
- **Technology:** The real allure of G Suite lies in the fact that you can use it entirely through a browser. No separate programs or applications are required to be downloaded. This means that there is zero set up time when a user is using a new device, and little concerns about whether the device is strong enough to handle G Suite.

Takeaways

- **An area to improve:** While Drive is very useful from an online file storing and sharing perspective, it can be difficult to organize folders and files for a user's own drive, and very difficult to keep organized across multiple drives. In this case, "organization" refers to naming systems, and use of folders. So, one way to one-up G Suite would be to make it easier to navigate and organize files across multiple people.
- **What delights people?** It could be argued that the real original delighter of G Suite was that it included so many different services under one label, and that you could seamlessly cross over between these services in your browser. However, this is no longer a delighter, but the standard we are expected to meet. That said, a potential delighter that we could provide.
- **Full Time Availability:** From the PACT analysis, it can't be stressed enough that this application will live and die based on how well it handles server load, how laggy it is, and how often it is unavailable. If there's anywhere that monetary investment should be directed, it's in always expanding server capacity.

Github by Kez

Github is a well-known version control software amongst software developers. For our project, it acts as an inspiration for our minimum viable product in three ways: version control for shared file storage, branching for collaboration, and task visualization tools for project management.

PACT Analysis

- **People:** Github is a software development focused web-application. The target audience is individuals, teams, organizations, and companies working on software projects. These people are either very experienced with version control and software development, or just starting out.

- **Activities:** Users engage with github to store their code, access their code later, collaborate on projects, manage a team project, and promote/share their work.
- **Contexts:** Github is usually accessed on a laptop or desktop computer in an office or study-room environment. It may also be accessed in a bedroom, shared living area, or coffee shop. Less frequently, a user may need to do small tasks on a mobile device while on-the-go.
- **Technologies:** Github must be reliable. Large companies rely on this application for code storage and version control. Without these services, their source code might be lost or inaccessible. It must have access to data centers that can store mass amounts of data. It must also be maintained so that it continues to serve a constantly changing field.

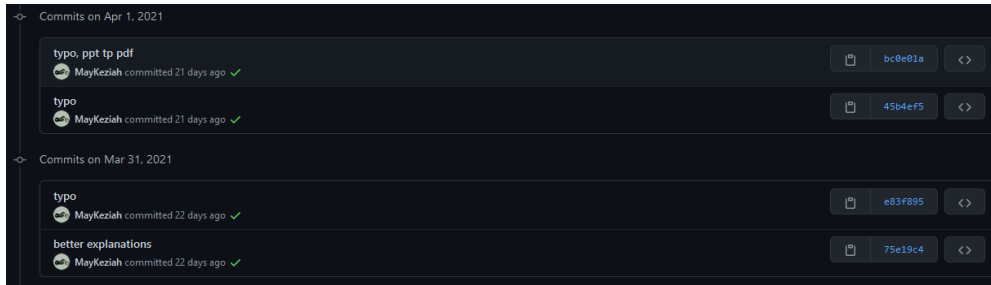
Version Control

Github supports shared file storage on the cloud. You can clone anyone's public files if their license allows it, get added as a collaborator to make modifications to their files, or store your own files. When you make a meaningful local change, you give it a title and push it to the cloud. This makes it accessible to anyone with read-permission to your Github repository. The true gem about this feature is not the file-storage itself, but the version control.

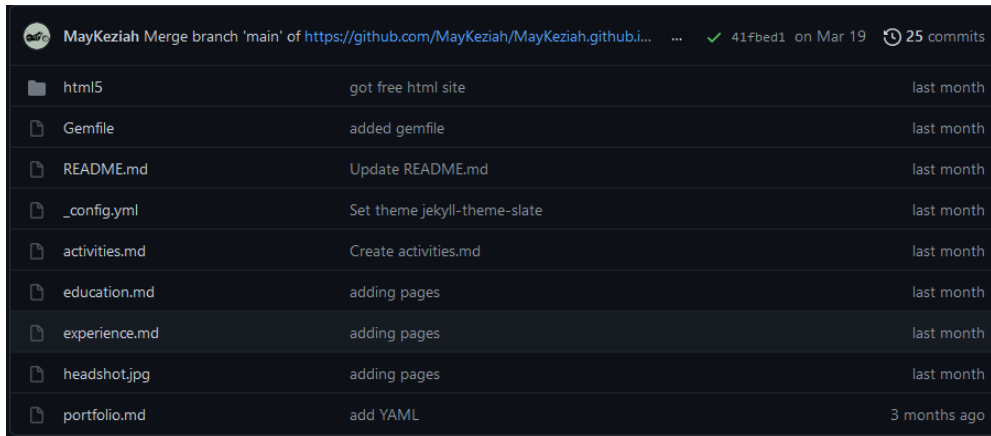
When you open a github repository, you get a view of the files and folders in their current state.

File/Folder	Commit Message	Time Ago
assets	switch to html	last month
examples	front page and contact page	last month
images	typo, ppt tp pdf	21 days ago
testingMdPages	switch to html	last month
Disassembler.pdf	typo, ppt tp pdf	21 days ago
LICENSE.txt	switch to html	last month
README.txt	switch to html	last month
about.html	front page and contact page	last month
contact.html	fix icon buttons	23 days ago
education.html	reorder coursework	23 days ago
experience.html	typo, ppt tp pdf	21 days ago
index.html	isabel's feedback	23 days ago
leadership.html	typo	22 days ago
projects.html	typo, ppt tp pdf	21 days ago

If, however, you want to see the history of changes made on the repository, you can view every pushed change and the name assigned to that change.



When you click on the “< >” button on the right hand side, it displays a snapshot of the state of your files and folders at that point in time.



At any point, you can revert back to a previously pushed version of your repository.

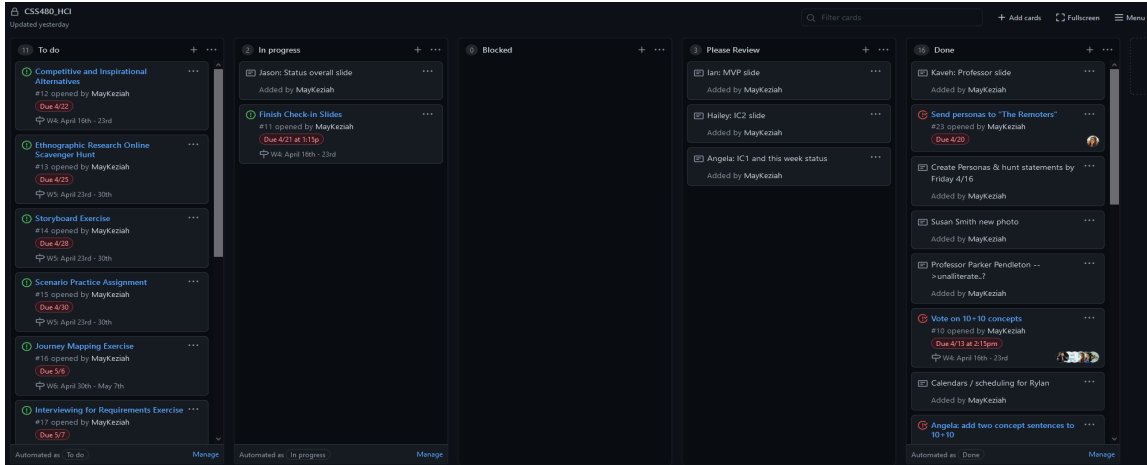
Branching

If at any point you want to experiment with some changes, you can just push the state as is, create a new branch, try something risky, and then return to the original branch if the risky changes failed. The branching feature allows you to create several copies of the repository at different states and modify them without accidentally overwriting your teammate’s work or messing up the files for the whole team during an experiment.

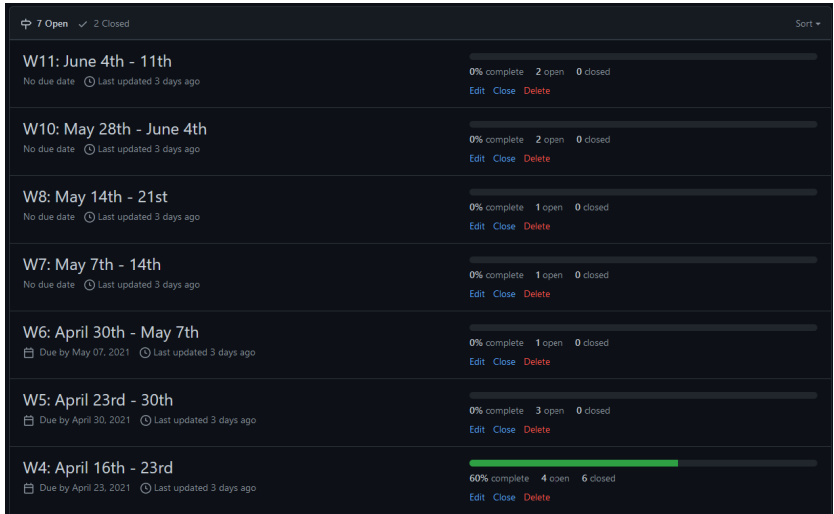
Task Visualization

Github provides task visualization tools that allow users to organize their backlog, view the current state of progress on each milestone, and see how individual members are doing on their assigned work.

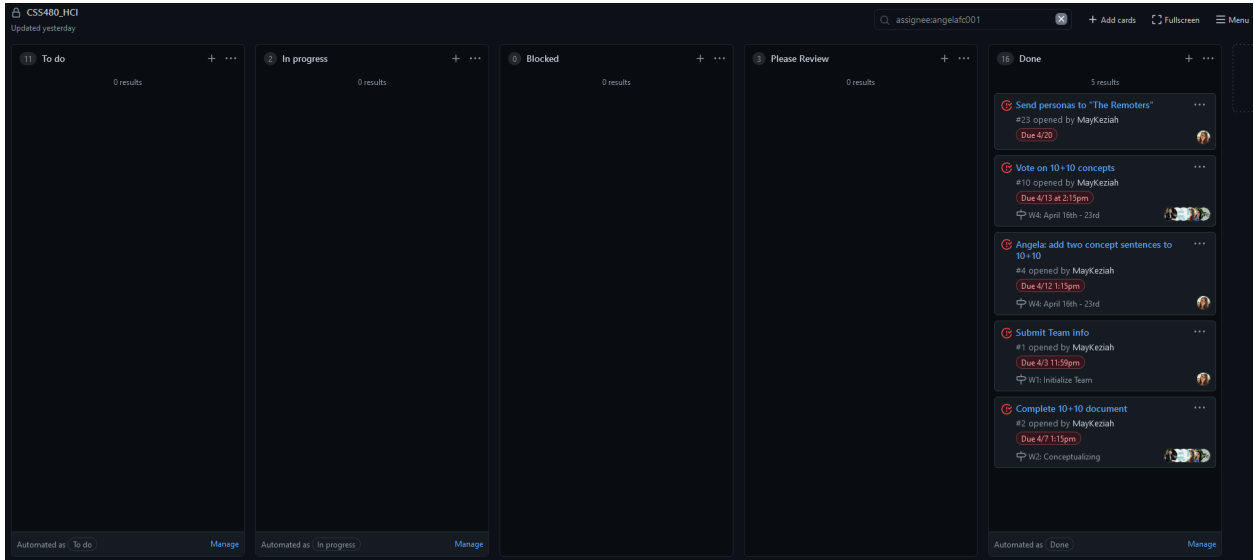
For backlog viewing, Github offers a kanban board. This can be configured any way that the team wants including the traditional “To-do, doing, done”, “MoSCoW”, and other organizations or versions of these methods.



To view how the team is progressing as a whole towards project goals, you can either filter cards by milestone, or look at the milestone report page.



To view the progress made by an individual, you can filter cards by who is assigned to them.

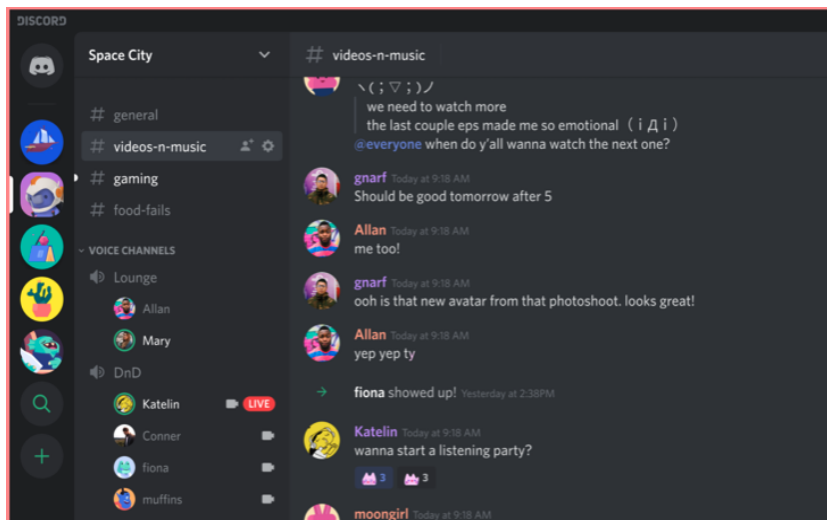


Key Aspects to Incorporate

These features are all very useful for remote team collaboration, but may need some adjustment to fit in with the team's goals. The version control and branching work very well, but they do not support real-time document collaboration. This is a feature we would like to include. The task visualization board is a great project management tool, but the milestone and user progress views are not as clear, easy to modify, and expressive as we may want for our project. Ideally, our visualizations will include charts for each user, the project overall, and each milestone. These visualizations should not take many clicks from the main page and should potentially appear on the project board page as small icons that lead to the metrics and progress reporting page.

Discord by Hailey

Figure 1: Channels in a server (“What makes Discord different?”)



PACT Analysis

- **P - people:** A diverse set of users use Discord. Organizations, gamers, and students use Discord as a way to communicate.
- **A - activities:** Users can use Discord for written and verbal communication (through channels). The user can also screen share.
- **C - context:** In a typical setting, a user is either accessing Discord through their phone, desktop, or laptop. Therefore, the context can vary (dependent on accessibility to the internet). The user can be by themselves, with someone, or with a group. If not alone, privacy can be a concern (notifications, information relating to the person's account). Depending on the organization, Discord might be used as a communication tool. Privacy and restrictions may be used regarding servers and channels.
- **T - technologies:** Discord can be accessed through a phone, laptop, and desktop. Therefore, keyboards, mouse/mouse pads, voice devices, and touch are used for input, and output is through a screen. A database is required to store accounts and servers.

Inspirations

Channels

Once a user is in a server, they can add channels for specific purposes. This would be applicable in Uninitialized Local's platform because it helps organize team communication.

User Restrictions

When a server is started by a user, restrictions can be made on those who have access to that server. For example, on a specific channel within a server it may be read-only for some users, whereas other users can write into it. Adding this functionality (or some version of it) to Uninitialized Local's platform would be beneficial as it would allow the team leader to have more customization/features when managing a team.

Voice Channel

Discord allows users to start voice channels within a server so that they can screen share and communicate verbally. This would be extremely useful in Uninitialized Local's platform as there meetings. It also can help avoid miscommunication.

References

"What makes Discord different?". *Discord*, <https://discord.com/why-discord-is-different>. Accessed on 22 Apr. 2021. Screenshot by author.