Milestone 2:

A. Task/ Problem Definition

Problem statement: There is a reduction of in-class feedback, and it is more difficult to review topics discussed in class because students often can't review recorded zoom lectures anymore. With the return of face to face instruction, students now lack the affordances of being able to rewatch recorded lectures and have online discussions

Interaction Example:

Trigger: The student missed a class and wishes they could review the lecture from home at that current moment.

Goal: The user wants to access the lecture slides.

Execution:

- *Plan:* The student thinks about where the professor usually uploads lecture content. This professor typically uploads each lecture's slides on eLC, but they also have a third party website that is sometimes used.
- *Specify:* The student decides to check eLC for the lecture slides.
- *Perform:* The student navigates to the course homepage on eLC and finds the missed lecture slides.

Evaluation:

- *Perceive:* The student finds the slides, but they are so vague that they make no sense without context. The slides are made up of mostly images which mean nothing to the student.
- *Interpret:* The student thinks to themselves "I really wish I had a recording of the lecture since I couldn't make it in person," and "I really wish I could ask questions without the professor knowing I was the one that skipped class".
- *Compare:* The student cannot meet their goal, and will have to go to office hours or email their professor and be embarrassed about missing class.

Potential Users: College students, professors, and/or TAs. Professors teach the content of the course to the students and manage the online platform(s). Students ask questions that are answered by professors and teaching assistants, as well as access any content on the online platform(s). TAs collaborate with the professor to aid the students in course-related issues.

With a solution to this problem, it would be easier for professors and TAs to answer student questions, as well as let students discuss amongst themselves. The students would also be able to review lectures before a test, helping them study and have a better overall learning experience.

B. Analysis of Existing Solutions

Existing solutions/platforms.

Piazza:

Pros: Students can post anonymously so there is less apprehension in asking the teacher or their peers a question. There is also an easier flow of communication, so feedback is more efficient.

Cons: Piazza can be hard to use and learn as the interface is not very intuitive to some students. Additionally, many signifiers in the platform are poorly thought out. For example, the "post" button does not look like a button and is just a word you click within a sentence.

"It can be utilized to give assignments, foster discussions, allow students to ask each other questions, and more…Piazza has built their business model around helping students by fostering a discussion. This can be in the form of assigned discussion topics or it can simply be questions posed by students…Piazza also allows for an additional avenue of contact to the professor(s). Professors can post their own content or replies on Piazza, but students can also message them directly if they would like. This can be good for professors whose email is always full to prevent them from missing important communication from students."

Piazza. "Piazza." *Piazza Review 2022 - Pricing, Features and Alternatives*, https://www.fileplanet.com/products/piazza.

Groupme:

Pros: Students can post and share notes with the entire class. Students can also ask classmates for notes if they missed a class. Additionally, students can ask questions to their peers and, if the professor is in the group, they can answer too.

Cons: It is an unorganized platform; there is no way to sort through old messages for students to find specific messages they are looking for. Also, student messages/posts can get lost if there are a lot of messages being sent, and questions can go unanswered. Finally, Groupme groups usually do not include Professors or TAs, so there is a risk of students spreading incorrect information or notes and there being no one to correct them. Because of this, cheating can easily happen due to the fact that it is unmoderated.

The author of this article appears to be a teacher and demonstrated how using GroupMe reaches more students quickly over the email platform. The students can use the platform to ask each other questions and discuss assignments without having teacher intervention. It can also be used as a reminder tool. This form of group communication can help students form connections with each other.

Daggs, Joy L. 2018, Creating and Extending Classroom Community with
        GroupMe,
        https://www.natcom.org/sites/default/files/pages/eTools_GroupMe_March
        _2018.pdf. Accessed 22 Feb. 2022.

"The app has many benefits for students, Tomlinson said, as it allows them to ask questions quickly and create study groups, as well as providing more instantaneous communication among classmates…If the administration finds that cheating has occurred through a GroupMe chat, Tomlinson said, anyone in the chat could potentially be held responsible."

"With Most Classes Online, Some UMD Students Are Turning to Groupme." The
        Diamondback, 25 Sept. 2020
        https://dbknews.com/2020/09/24/groupme-social-media-cheating-umd-virt
        ual-classes/.

Zoom recordings:

Pros: Professors can record their lectures during class and later post the videos on a platform like eLC for all students to watch or rewatch as needed.

Cons: Students cannot ask live questions while watching a zoom recording due to it having already happened and, if they are watching "real time", many times Professors are not paying attention to the chat section of the Zoom.

"You can effectively record the live classes and lectures for future purposes and needs. Each of the recordings will be stored on the device that you can later upload on the cloud for other students to access it…In the time of presenting something using screen sharing feature of Zoom, there might be a need to leave notes or marks on some places of the screen for reference. The annotation feature of Zoom is there to allow you to do this using some pens, arrows, or highlighters."

Bowen, Howard. "Using Zoom for School: What Are the Pros & Cons?" Zoom App Download,28 Aug. 2020, https://videoconfguide.com/zoom-for-school/.

Guidelines of existing solutions

Principles:

1. Zoom and Groupme both follow the principle of discoverability. The signifiers afford intuitive discovery of the features both have.
2. Zoom, Piazza, and Groupme all have good feedback. It is easy to tell when a message is posted across all three platforms, and if there is an error you will receive an obvious message.
3. Groupme has a very good conceptual model. The layout is very similar to most messengers, so it is simple to use if you already text others.
4. Zoom and Groupme both afford unique capabilities that other platforms do not offer. Zoom affords simple video chatting and screen sharing capabilities. Groupme affords large group messaging.
5. Zoom and Groupme have proper signifiers. Both platforms use simple icons and labels to help afford the user discoverability and ease of use.
6. Groupme has good mappings. It is easy to navigate and choose who you want to send a message to.
7. Piazza has good constraints. Due to having two separate scrollable regions, it offers easy page navigation.

Guidelines:

1. ***Offer informative feedback:*** Groupme and Piazza allow this guideline to happen easily. With instant messaging and posting, students can answer each other's questions easily and quickly
2. ***Permits easy reversal of action****:* Piazza allows students to edit their posts after they submit them.
3. ***Keep users in control:*** A student can easily adjust the speed of a recorded zoom lecture. The student is also able to rewatch or skip over certain parts of a recorded lecture.
4. ***Seeks universal usability:*** The professor can enable auto-captions for a zoom recording, making the lecture accessible to hard of hearing students or those with other disabilities..

C. Proposed Solution

Proposed solution:

A new tab on eLC which allows the Professor to post a recording of their lecture. If there is no recording, there is a place for the teacher to upload slides or notes from class. On the same page there is a discussion board, so students can ask questions in the same place that they are watching/reviewing class topics. All students will be able to see what questions were asked and have the option to post, respond to their peers, or share notes.

Creating this page combines the functionalities of Groupme, Piazza, and Zoom in one place. This page affords students the ability to communicate and easily review topics in the same place. Students also are familiar with the platform because they already use eLC. The properties of a discussion board, the class recording, and any slides being all in one place is optimal. Having a new page on eLC serves as a signifier for easier class-related discussion and ease of learning.

Measure of Success:

Being able to see how many students visit the eLC page will tell us if they are inclined to use the features we have discussed. Also, due to current eLC functionalities, we would be able to see correlation between a student's grade and whether or not they viewed the page. Another way to see if this page is successful would be to see how many students utilize the discussion board. If students don't utilize all functions of the page, that is a good indication that some functions of the page are not ideal.

D. Summary Video

https://youtu.be/tiXaubnff-Y

Credits
Writers: Lindsey, Jessica, Lizy
We worked on all parts together.
We met multiple times to work on this and it was all equally contributed.