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Milestone 1

User Research

1. What problem does your application address?

Our website addresses the problem of disconnect between professors and students in traditional classroom setting; students find it difficult to interrupt the lecturer to ask questions, and when they do, some of their questions do not benefit their classmates as much.

2. How does your application address the problem above? Aim for one sentence. The next question is a better place for elaborate explanations.

Our application addresses the problem above by allowing students to type questions they have during lecture. Thus, the professor and TAs will be able to see what students are having trouble with and can then spend more time explaining these topics.

3. What are the killer features of the web?

A. Real-time upvoting question tab--The students in the class collaboratively write the questions they have in class and vote, and the professor can answer the most popular ones to save time
B. Feedback tab--The students can indicate to the lecturer whether the pace of the lecture/recitation is too fast or slow. This would also follow the upvoting system where the professor gets an alert for every delta number of students who vote for "too fast" or "too slow."
C. Vocab list sidebar--collaborative note-taking. Students can post the vocabulary words they understand from the lecture on the website so that students/TAs can put the definitions real time. Also expands out to a larger window and has print/save features

4. Identify and briefly describe your target demographic. Who do you envision using your site?

-We expect students and lecturers in colleges and universities to use our website, specifically those taking classes that have more than 50 students with devices that can access internet during lecture (this includes lectures that are streamed live outside of that particular school). We also expect the vocab list feature to be useful for subjects such as biology, math, chemistry, physics, history, philosophy and economics.

5. Identify at least one user characteristic (technical expertise, familiarity with site topic, frequency of visits) that you believe will cause users to use your site differently or require different features from your site. Briefly explain why your chosen characteristic is important.

I. Frequency of visit--Students who are not familiar with the lecture topics will be more inclined to visit the web application; others will just listen to the lecture. We address this difference by having a database that archives every few lectures so that students who do not visit the web during the lecture are not at a disadvantage.
II. Level of understanding—determines the pace of the lecture. The professors and TAs may move through topics at a pace that is overwhelming to some students

6. Use the above to help you find three users from different attitude/behavior sets within your target audience. Sit down with these people and conduct user research interviews on each of them. You might ask your users how they currently deal with the problem that your site aims to solve, or you might ask what features they'd want in a website such as yours. You might try to explore their general attitude toward the problem. The information you collect will guide your site's design and the features you chose to include. Briefly summarize these interviews and what you learned from them.

Jonathan's interview: Alex Danielsen, a student at MIT
> Do you have problems about asking/answering questions? Are you aware of such problems? How do you deal with it?
No. There are times when the professor asks questions to the class, and it is awkward when nobody answers them.
> do we need to deal with it at all?
No. After a few classes, it works itself out.
> would you use the question feature?
Yes.
> would you use the vocab list feature?
Maybe. It would depend on the subject.
> would you use the feedback feature?
For subjects like Biology it would be more useful.
> what classes would you use this website for? (ex. 7.012)
18.01/2 (math classes)--question feature would be useful to filter out people who ask irrelevant questions and smart-alecs. 7.012 for professors who go too fast
> would you want the session to be archived? If so, for how long?
Yes. until the unit is over
> what features would you use the most/ would want to see together/ want to see in the front:
question feature
> suggestions: what more do you want to see in this website?
Asking questions before/after the lectures.

Clare's Interview: a student at MIT
(A similar set of questions as Jonathan's was asked in this interview)
I never ask questions during lecture because I'm scared that everyone else will think it's a stupid question. I would use this website because if I can ask questions online, I'm not directly interrupting the professor and I can also see if other people have similar questions. It would be cool if you could add something like clicker questions.

Harlin: Professor Lee, an economics professor
> do you have problems about asking/answering questions? are you aware of such problems? how do you deal with it?
Students have trouble asking questions when there are many other students in the class. Some want questions answered anonymously. Some aren't sure if questions should be asked to TA/professor/friends.
> do we need to deal with it at all?

Sometimes I give them practice problems beforehand and talk about a couple of them afterwards
> what classes would you use this website for?
For lectures done in huge lecture rooms or broadcast online
> would you want the session to be archived? If so, for how long?
Everything is archived until the end of the semester but questions with real names attached should only be deleted by the original questioner
> what features would you use the most/ would want to see together/ want to see in the front
first/home page should inform the users of all the features
Questions& answers should be grouped together
student discussion boards?
> suggestions: what more do you want to see in this website?
Answer the problem of diverting attention away from lecturer?
Distinguish questions that need to be addressed immediately, or things that can be answered later, maybe by color. Have a rating system to make things fair?
Give everyone a certain number of points(lemons, stones, stars, etc) every week or every class, and they can use them up depending on how urgent their questions are.

7. Explain any modifications to your initial idea or your initial feature set based on your user interviews.
We added the rating system to our idea and are considering a separate database to archive the set of questions and answers and cookies to track which questions were written by individual account.

8. Use these interviews to develop at least two different user personas.
Example 1. An MIT professor who's giving a special 2 hour talk about his current research in quantum physics and has the lecture broadcasted to students in Beijing University. Students in Beijing University want to ask questions during the lecture but are unable to do so.
Example 2. Professor A just spent twenty minutes talking about his quantum physics research and needs to cover two chapters of material in thirty minutes to prepare the class for the test next week. Nobody in the class except the TAs understand his lecture.

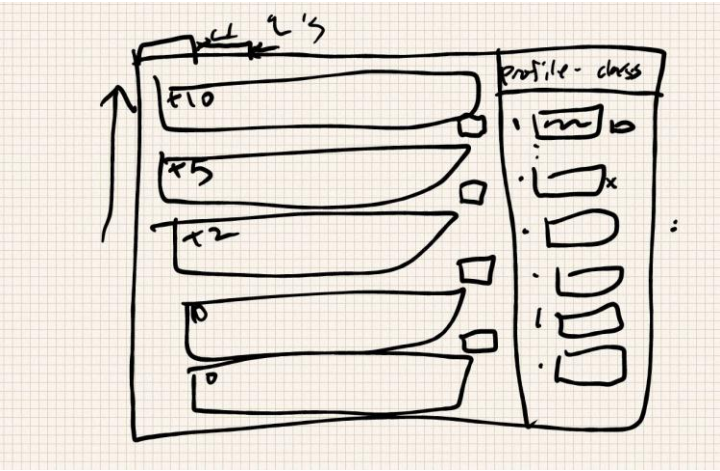
9. Develop at least one use case for your site. This should be a list or table demonstrating a sequence of user actions and website responses that occur when a user attempts to complete a core task on your site. Make sure to indicate the task the user is trying to complete.

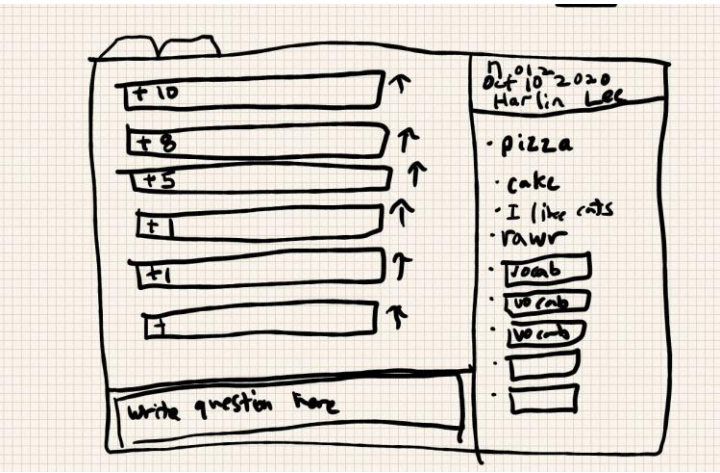
User(s)	Website
Has a question to ask and logs in	
	Displays the content of the class tab
Submits a question	
	Displays the list of questions
Votes up a question	
	Updates the list according to priority
Professor sees them and answers the most popular questions	

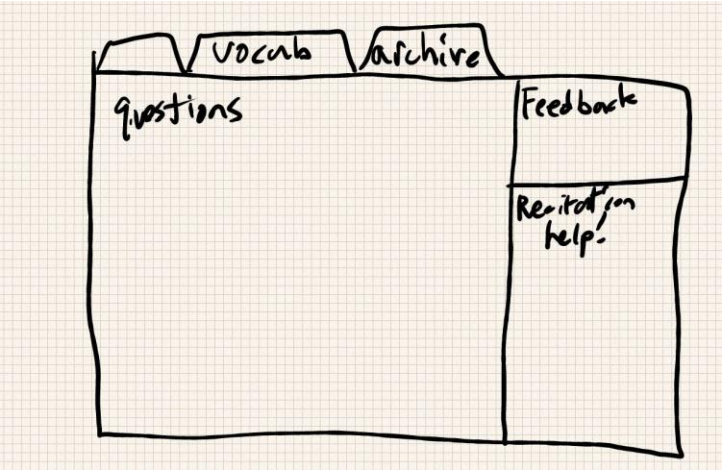
Site Design

Think hard about your most complicated page. What are the important features of this page? What usability problems may come up? For your most important page:

1. Draw out, by hand, three different designs for this page. Scan these for your submission.
2. Make a list of pros and cons for each design (3 pros and 3 cons for each).

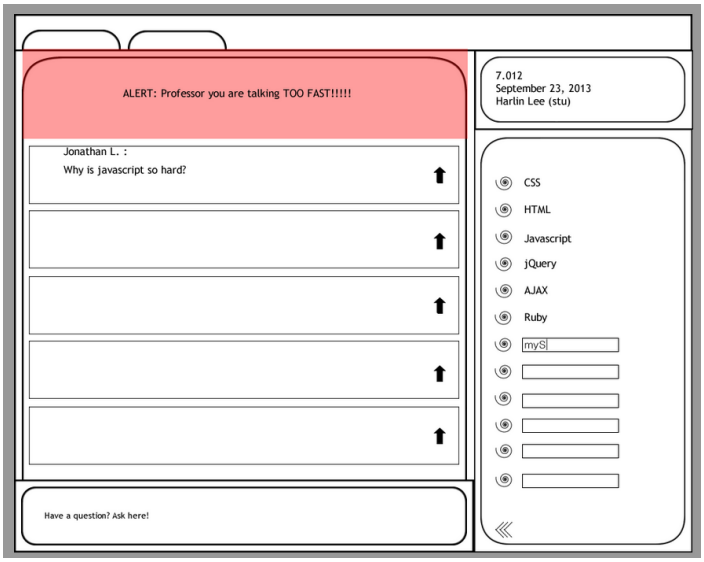






#1. Pros: not cluttered.
Cons: hard to switch tabs and not everything in one page
#2. Pros: everything in one page
Cons: cluttered
#3. Pros: well organized in tabs
Cons: hard to switch tabs.

4. Pick the best design and mock it up using a program such as Photoshop, Inkscape, Gimp. Submit a screenshot of this mockup.



Additional Questions

1. Who is on your team? You may list at most 3 people. For each member list the full legal name, .edu e-mail, school, major(s), year, and graduate/undergraduate status.

Clare Liu: clareliu@mit.edu, MIT 1st year undergraduate
Dong Hyug Lim: dhlim@mit.edu, MIT 1st year undergraduate
Harlin Lee: harlin@mit.edu MIT 1st year undergraduate

2. Would your team like to participate in the **Rookie Division**?
Yes.

3. Which of the themes does your application match? Your answer should be one sentence if the match is reasonably obvious. Be as brief as you can. If your application matches both themes, list the one where the matching is more obvious.
Theme2. Real-time education

4. What technology do you plan to use for your server-side programming (e.g. PHP, Ruby on Rails, etc)?
PHP

5. What risks do you envision preventing you from successfully implementing your idea? Consider this an exercise of imagination, not a test of confidence.
Our lack of programming knowledge and time limit