Class.ly: Helping Students Collaborate
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I.   Project Summary

Class.ly is a collaboration platform for Vanderbilt undergraduate students. Post-graduate work, either in academia or industry, has become increasingly collaborative with the rise of simple, mobile communication and the open-source paradigm. This paradigm has also penetrated the undergraduate academic realm in the form of small, team-based projects to accomplish large-scale tasks. Class.ly helps facilitate communication between students in order to complete these tasks.

Quite often, undergraduate students are tasked with problem sets, group projects, or mass confusion about upcoming assignments and deadlines in each class. When enrolled in four or more classes, this confusion compounds to add stress and disorganization to the lives of already busy Vanderbilt undergraduates. Class.ly solves this problem by offering students the opportunity to organize their academic classes in an easy to navigate application that automatically creates chatrooms, helps plan work sessions, and allows students to take notes on important meeting takeaways, all on a per-class basis.

One of the most difficult and stressful parts of undergraduate life is communicating with people in one's classes to get questions answered. This difficulty is rooted in procuring contact information among a large group of students in order to communicate effectively and plan meetups. This is the core value-proposition Class.ly offers to Vanderbilt undergraduates. By integrating Class.ly with Vanderbilt's online enrollment system (YES), Class.ly is able to automatically pull the list of enrolled students in each class. With this information, Class.ly automatically creates a "Classroom Chat" with all enrolled students. This core activity of the app mitigates a large pain-point for many students. The forum (automatically created by Class.ly) is a great way to help students minimize confusion by chatting freely (anonymously or otherwise). Additionally, in the case of group projects, Class.ly also allows students to start personalized chat rooms, solely including people in their project groups.

The other core activity of Class.ly is to facilitate working sessions for students to collaborate on assignments. Using the per-class list of enrolled students, Class.ly allows students in a given class to schedule meetups, take notes on the meetup, and view historical meetups. This feature is also invaluable to undergraduate students, as another pain-point often lies in finding a time where groups can meet to make progress on upcoming tasks.

The Class.ly application will mitigate, if not eliminate the need for stressful communications between Vanderbilt students by limiting the need to acquire direct contact information and helping students work together to prepare them for the collaborative nature of industrial or academic post-graduate life.

II.   Initial Description of Potential Users

Class.ly's potential users are Vanderbilt undergraduate students who will benefit from the ability to easily communicate with fellow their classmates. Class.ly's main user-base will be students who struggle exchanging contact information and communicating on group projects, groups who have trouble finding times to meet to make progress on assignments, and students who have questions and confusion about an individual class. By integrating with the Vanderbilt University course enrollment system, Class.ly helps students avoid confusion and inefficiency often common in undergraduate academic life. Class.ly will provide a seamless communication experience for students who struggle with coordination, and ideally will become a part of their everyday workflow to make progress on their assignments.

III.   Similar Systems

There are two existing applications that are similar to the concept of Class.ly. The first application is StudyRoom: Power to the Students (Browning, 2015). StudyRoom allows students to connect with classmates to exchange notes and meetup to work on homework or study for an exam. StudyRoom is very similar to Class.ly with the ability to meetup to work on assignments, but is focused more on the ability to share notes and information on lecutres. Class.ly will differ from StudyRoom with the ability to add subgroups within a class to help students organize information for projects and smaller group meetups. StudyRoom is focused on the entire class collaborating to help students get notes they missed and help on homework assignments by posting questions to the entire class.

The second application is NextSeat: College Class Connection (Blackman, 2015). NextSeat allows students to find out more information about students in your classes, form study groups, and share notes. NextSeat has group messaging between students in the same class and allows you to post notes in individual class timelines. Class.ly will have group messaging for students in the same class, but also allows students to form smaller group chats that will be useful for group projects and smaller class assignments.

IV.   Perceived Benefits of Class.ly

The perceived benefits of Class.ly lie in automatically generating chat rooms for students enrolled in a particular class, as well as helping those students plan meetups to work collaboratively on assignments. The perceived benefits are most pertinent for incoming first-year students who have not yet acquired the contact information of their peers. For older students, the benefits are less pertinent because they are *more* likely to have the contact information, but that is not guaranteed. The ease-of-use of Class.ly will be the largest benefit. Systems such as those

outlines above (see "Similar Systems") have complex interfaces that integrate email-style messages, for one example. Contrarily, Class.ly will utilize instant-message-style messaging which is naturally more intuitive and familiar to undergraduate students. The true benefit of Class.ly lies in that it is designed by undergraduates, for undergraduates who have felt the pain of group communication.

V.   Preliminary System Constraints

The largest constraint and risk of building Class.ly is integration with the Vanderbilt University online course enrollment system. This data is highly sensitive and protected by the university, and without proper permissions, will likely not be shared with undergraduate application developers. Course enrollment information, as well as student contact information to facilitate the chat feature will be highly difficult to acquire. To mitigate this risk, the Office of the Registrar at Vanderbilt University must be considered a stakeholder in the development of Class.ly such that all development and product security concerns they have are addressed.

In the initial implementation of Class.ly, real student and class data will not be used, due to security concerns with a prototyped system. To simulate the performance of the application, mock student and course data will be created in a development non-relational database environment. This will be a limited dataset, likely including just a few classes and a few dozen fake students. Regardless, this information will be used to populate the data fields of the Class.ly application. This will allow the developers to perform user testing with potential users and stakeholders to validate usefulness and verify performance of the application.

Another key system constraint in the Class.ly prototype is short development lead time. Again demonstrating the hectic lives of undergraduates, both developers of Class.ly are extremely busy outside of academics and will have limited time to develop the application. To manage this, the developers will focus their efforts on designing a Minimum Viable Product (MVP) for the application which will include a limited feature set. This feature set is mainly focused on front-end development, specifically on the user interface and the most common interactions that potential users will have with Class.ly on a daily basis.

VI.   Minimum Viable Product (MVP)

The Minimum Viable Product of Class.ly will focus on the most common interactions that potential users will have with the application. In the first iteration, these interactions include: showing a splash screen (responsiveness), navigating a home page listing a user's classes, interacting in the chat room for a single class, and scheduling a meetup for a single class. In the application prototype, the class page will be fully functional; however, the chat room and meetup scheduler will have limited functionality, due to short development lead time. Eric Ries,

a pioneer of the lean startup movement and serial entrepreneur defines an MVP as "that version of a new product which allows a team to collect the maximum amount of validated learning about customers with the least effort" (Maurya,, 2015). In the case of Class.ly, developers will validate the usefulness of the application via user testing, without a fully implemented chat room and meetup scheduler, the most costly and labor intensive actions in the application.

VII.   Proposed Project Completion Schedule

Date	Class Requirements	Class.ly Requirements
9/10	Initial Project Description Documents	Initial Project Description Documents
9/14		Wireframe Prototypes (Draw.io Wireframes)
9/22		Clickable Prototypes (Axure Prototypes)
9/24	Requirements Documents	Requirement Documents App Development Begins (Ionic Framework)
9/29		Clickable Prototype User Evaluation (Experiment with Users on Axure Prototypes)
10/1	Data Analysis Results, Prototyping Plan	Data Analysis Results, Prototyping Plan
10/6		Mock Data Complete (In Non-Relational Database) Back-end Prototype Complete (Database, API)
10/8		Front-end Prototype Complete (Ionic Framework, Bootstrap Style)
10/13	Prototype Demonstration	Prototype Demonstration
10/22	User Test Plan	User Test Plan

| 11/30 | Project and Supporting Documentation | Project and Supporting Documentation |
| 12/10 | Partner Evaluation | Partner Evaluation |

VIII.   Web Page

The documentation for CS3892 Human-Computer Interaction, as well as the source code for Class.ly is publicly available online in a Git repository. The repository can be found here: https://github.com/masiamj/CS3892-HCI-Class.ly.

Resources

Blackman, U., Zell, A. (2015). *NextSeat: College Class Connections.* Retrieved from
http://nextseatapp.com

Browning, J., Malca, E. (2015, April 28). *StudyRoom: Power to the Students.* Retrieved from
http://getstudyroom.com

Maurya, A. (2015). *Minimum Viable Product.* Retrieved from
http://leanstack.com/minimum-viable-product