University of New Hampshire
College of Engineering and Physical Sciences
Computer Science

COLLABi

A Web Based Collaborative Educational Forum

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Goals

The Goal of this project was to create an environment that encourages learning through **ease of access**, fluid interface and **social integration**. We've found that many **Computer Science and Engineering** students aren't typically social with their fellow classmates. By using **COLLABi,** we want to drive them towards cooperation on **all** assignments.

We Aim to Deliver:

- More **Intuitive and Clean Interface** than Blackboard
- Easier **Resource Management** than Piazza
- **Adding Social Media integration**

Unique Features Would Include:

- **Status Updates** - "Assignment 3 is tough!"
- **Location Updates** - "Hey, I'm at the CS Lounge!"
- **Response Ranking** - "Great Answer!"*

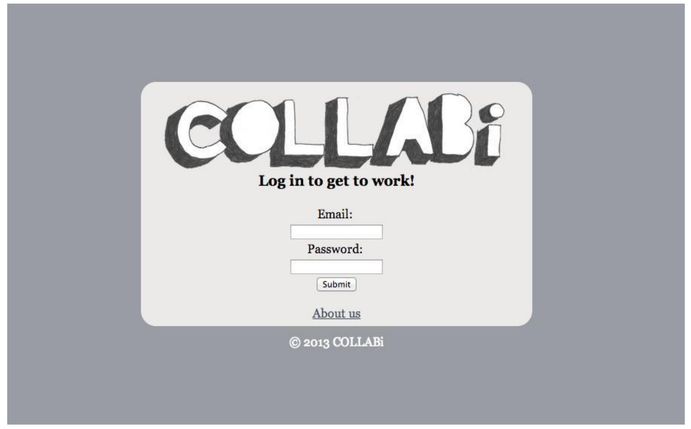
**COLLABi Reputation System Not Yet Implemented*

How the site works...

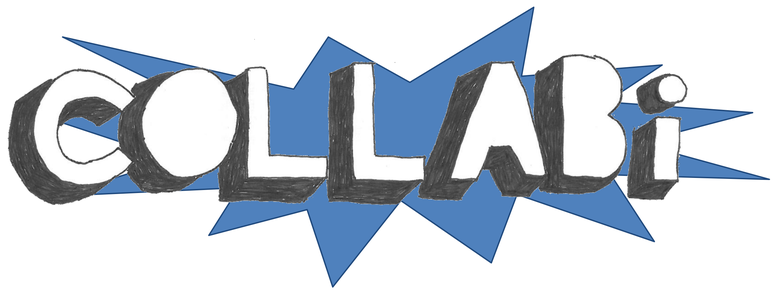
It's quite simple, really. The overall architecture can be described in a matter of a **few steps.**

- The course **Instructor** posts an **Assignment**
- **Students** ask **Questions** and link to relevant **Resources**
- Other **Students Comment** on **Resources** and **Answer Questions, Post Status** or **Location Updates** to group up and work on problems **together.**
- The **Instructor** goes over the correct answers in class, or **posts them on the site.**

There you have it. The **answers** are ungraded, and everything contributed is used as a way of a **supplement** to the class. This is a great way to **move along the learning process** for a lot of classes.



piazza + Blackboard + reddit =



Feature	Blackboard	Piazza	COLLABi
Assignments	Basic, Slow, Ambiguous Navigation Structure	Organized through "Tags" and variable difficulty for ease of access	Will expand on the Piazza model by implementing a "reputation" model to encourage participation.
Class-Related Materials	Instructors can share with students, but there exists no way for students to provide other students with resources	Attachments to posts, but types and ease of access is severly limited	Allows for Blackboard-like lists of materials and links, but also provides a section for students to share with their respective classes.
Organization	Class Level Organization, Folder-Based Sensible, but the Blackboard application turns out to be poorly implemented.	Organization is strictly tag based. Efficient, but can easily become disorganized if the "Tag" is unknown to the user	Class Hierarchy Model with Optional Tags Efficient, Smooth, Sensible

Feature Comparison Table

Technical Details

The foundation that we chose for this project is **CodeIgniter**, a PHP-Based Framework that makes building **data-driven** sites with complex database schemas more straightforward and provides **better documentation** and **more readable code** for further developers and easier maintenance. The footprint of CodeIgniter isn't very large, either.

We put a lot of pressure on our developers to create a structured framework similar to **Ruby on Rails, Django, CakePHP**, so that **migrating** from server to server will only require a **basic Apache Setup** with **PHP Implementation**.

FRAMEWORK: CodeIgniter 2.1.3

SERVER REQUIREMENTS: *with* php-ActiveRecord, MySQL 5.5.23, Apache 2.2.22

Future Goals

The future for **COLLABi** will require the following maintenance and feature enhancements in order to be ready for deployment:

- Implement the **voting system mechanics.**
- Create special **Status** and **Location Posts**
- Provide a better **AJAX Application** for the current static site
- Develop a **mobile interface**
- General **Polishing** and **Security** Considerations, with **Usability** Testing.

Project Sponsor: Prof. Karen Jin, Univ. of New Hampshire, Computer Science Department