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CS498 Project Proposol

Ask-A-Librarian

- What problem are you trying to solve and why is it important (~1 paragraph)

We are building the client side patron chat web application for the library's Ask A Librarian webchat service. The current application can be seen on www.library.illinois.edu, which you can see is using an outdated technology(aol). We are completely re-writing the app so it adapts a newer technology, XMPP, while still customize it for the UIUC library. In this class, we are only writing the patron app entirely as an AppEngine application.

- What makes this problem challenging (~1 paragraph)

The client side app must synchronize and communicate with a radically different Librarian end. While the front end Patron App may look very simple and easy to use, it must respond and work with a whole suite of features on the librarian end that is, ultimately, invisible to the Patron.

- How have other apps tried to solve this problem and how to their solutions fall short (~1 paragraph)

There are many other apps that are a simple chat clients that communicate over the XMPP protocol. There are even Commercial-Off-the-Shelf software which act as a help desk that many Customer Service departments use. However, the library needs one that is very specific to its needs and ultimately, a Patron Client App that is uniquely capable of plugging into this system.

- A brief description of your app and how it overcomes the shortcomings of the existing solution (~1-2 paragraphs)

The application falls into three primary parts: a Librarian App that is powerful and able to work with other instances of the Librarian App to service many Patrons, a Patron App that is outwardly simple but on the back end plugs into the system to provide specialized information to the Librarian and modify its behaviour based on the state of the overall system, and finally a comprehensive Data Center, that handles all the responses of incoming apps, providing them with the information they requested and ensuring the system stays stable, even when failure occurs.

The Patron App allows patrons to communicate with one or many librarians from anywhere, entirely anonymously, for whatever help they might need. The outside interface is simple, with a chatwindow, an editable name (that is generated randomly initially), and an ability to input messages. However, the app must do things such as placing itself into a queue, contacting automated bot accounts to alert librarians, parsing formatted messages that are really commands, and other myriad of corner cases that occur in a complicated system such as this. Updating the old system to new technology also present an oppurtunity to implement new, convenient features that were crude or unimplementable in the past, bring the Ask-A-Librarian feature inline with more modern chat services.

- List of features that your app will have (bullet points)

1. A simple, modular application that can be easily integrated into not just other UIUC webpages, but also other university libraries, browser widgets, or mobile phone apps.
2. Instant, anonymous communication between you and UIUC Librarian staff.
3. Updating the current system to include new, modern chat features such as notifications, detecting when another user is typing,

- Preliminary thoughts on the server-side and HTML5 components you will need to use in your app (~1 paragraph)

This app will make use of the Google App Engine Channel API for real time communication and Web Push features from Adrenaline Browser.