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Professor Callahan

ITWS 2110 - Web Systems Development

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CommuniTea

Project Summary

CommuniTea is a web-based application designed to enhance the personal timekeeping and organisation of its users. By combining commonly-used tools such as calendars, reminders, and news bulletins, CommuniTea allows users to stay up to date with their plans. A number of similar applications already exist, however CommuniTea has certain features which set it aside from the others. CommuniTea is designed specifically for communities such as Universities - by displaying live feeds from information media such as Union Newsletters, Club Events, and Instagram Promotions, CommuniTea allows users to stay up to date with local activities in their Community.

CommuniTea is formatted in a user-friendly, visually-appealing way, in which a monthly calendar displays time-blocked events (such as a class from 12:00pm - 1:50pm, or a live performance from 6:00pm - 9:30pm), as well as task reminders (such as a homework due date, or a grocery shopping trip). On the application's right side, CommuniTea displays upcoming community events. For example, an RPI CommuniTea might display a concert hosted by The Rensselyrics, UPAC Cinema showings, or an upcoming Football game. If a user were to look at their Calendar, and see they have nothing to do this Saturday, CommuniTea's upcoming events may give them an idea of activities to spend their time doing.

While the base application will be designed for Rensselaer Polytechnic, there are very few changes required to expand its capabilities to other communities. Admin users are able to modify the application to display newsletters from other organisations, such as different University Unions, or local Town News bulletins.

Summary of Technologies

Our application will heavily rely on the use of both HTML and CSS. HTML is a type of markup language that is used to create a seamless, clean, and interesting website. With HTML, also known as Hypertext Markup Language, we can create the layout of our application, input the body text and header text when appropriate, and create important conceptual aspects, like a website menu and a sign in / sign up page. CSS however, is used more for the visual design of our application. Also known as Cascading Style Sheet, the CSS controls things such as the font, padding, and color of text. It also controls the background images, layout of the text, and any other design aspects that our application may require in order to look as visually pleasing to the user as possible.

Javascript will also be heavily used to allow our users to interact with the webpage. Javascript allows the user to alter the page HTML and CSS. The calendar will make use of features like buttons and popups in order to add and customize events.

In our use of JavaScript, we will also be utilising jQuery, an expansive JavaScript library, which provides methods to modify the DOM (Document Object Model), CSS Animations, and AJAX (Asynchronous JavaScript and XML). AJAX allows us to update the webpage in real time, without requiring users to refresh the page they're on to see updates to it. Additionally,

AJAX methods will allow us to import live feeds from newsletters and social media sites, to display current events and activities in the users' local area.

Another technology we will use is PHP. PHP, also known as PHP: Hypertext Preprocessor, is a server-side scripting language for the web. It's a technology that runs on PHP-enabled web servers. PHP will be very useful for our project as it will allow us to make server-side reads and edits as well as the utilization of code for different functions. There are a lot of possibilities that can be achieved with PHP, where without it, our project would be difficult to implement.

Finally, we will use MySQL(Structured Query Language) database systems to collect and manage a database of union organisations and activities, to supplement the display of newsletter data in the CommuniTea application. The database will begin small and grow over time as more applicable information is added to it, to thus expand on the information given through the newsletters.

Stakeholders

The main stakeholders of the app are students and club leaders. Students get value from the app because it allows them to break down their schedules and stay organized. It's easier to be engaged and happy on campus when you can keep track of clubs and events going on. Students can check off test blocks and clubs to show only their essential blocks or they can change their settings to check out all the clubs and events.

The app helps club leaders reach members by having their meeting times clearly advertised. Currently, you have to hope people see your flyer amidst a sea of other flyers and actually write down or take a picture so that they remember what times you meet. If the time

changes or is wrong then potential club members will be lost since they'll be in the dark. If students have the ability to easily schedule their clubs they'll be more likely to show up and clubs will have more active members. Club leaders can also see other clubs' times and events on the calendar which will give them a better idea of when to schedule their own meetings and special events while avoiding conflicts.

Functional and Non-Functional Requirements

There are many functional requirements used that will guarantee the effectiveness of our application. Firstly, the user will have to sign into our application using an authorization system. They will input a username and password, which will be stored within a secure database. This will allow them to save their calendar and reminders, and also allows the calendar to be customized to their needs (such as specific clubs the user is in, class schedule, etc). When the user first creates an account, it will be recommended that they use their RSCID and Rensselaer password, but it will allow any username and password, just in case our application was to be later expanded outside of the bounds of Rensselaer Polytechnic Institute. Once the user has created an account, they can customize their personal calendar to their choosing, in which they can change colors of banners, set reminders for events or classes that are taking place, and even see up to date social media feeds from the Union here at RPI.

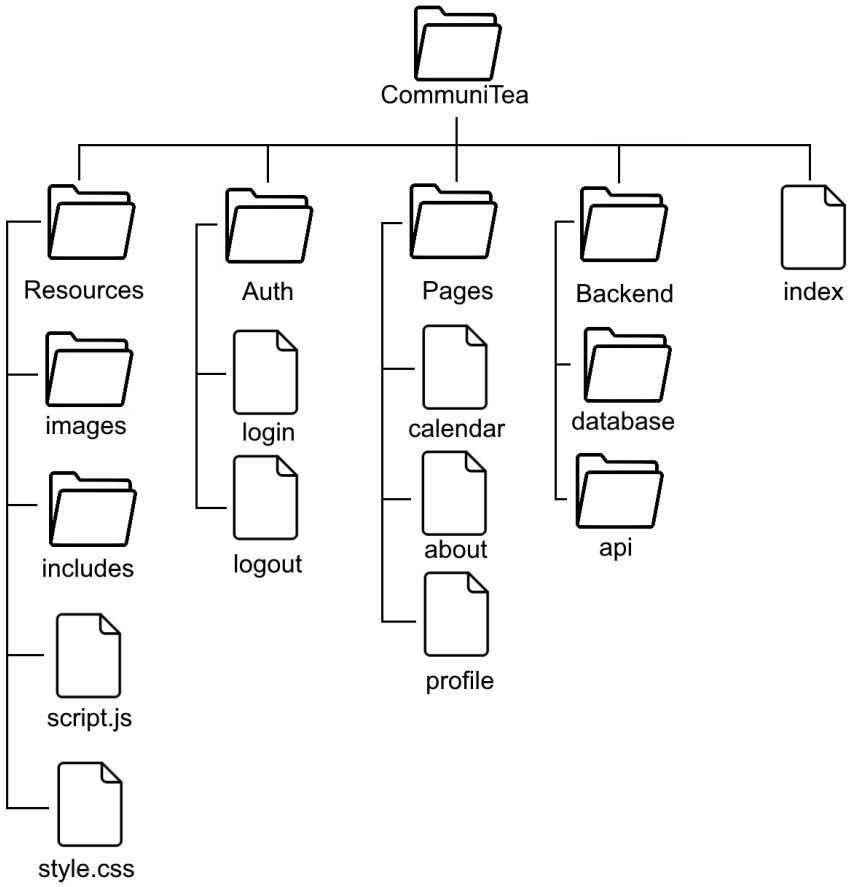
Additionally, there are many non-functional requirements that must be taken into consideration, such as security, reliability, accessibility, and maintainability. Of course, security is the most important aspect of the non-functional requirements, due to the fact that the calendar will have the users schedule, and most likely will contain information about where they are, what time they will be there, and even who they may be traveling with. If this type of information

were to fall into the wrong hands, not only would the users privacy be violated, but their well-being could be put in danger, and they could be put at risk of an unsafe situation. It is for this reason that we will require a secure username and password, with the password being at least 7 characters in length. Reliability is also another important concept that we must ensure works properly. If we create an unreliable calendar, in which reminders don't go off at the correct time, or events are offered with inaccurate information (such as date or time), then the user could potentially show up for an event that isn't taking place currently, or completely miss an important meeting that was scheduled. This would be extremely frustrating for the user, and would most likely result in them turning to another application or completely giving up on using online calendar applications in their entirety.

Project Schedule

Task	**Estimated Deadline**
Project proposal and presentation	Friday, September 17th
Basic HTML and site structure of application	Tuesday, September 28th
Basic CSS and layout of application	Tuesday, October 5th
Midterm Presentation and Demo	Tuesday, October 15th
Database Implementation & JavaScript Framework	Tuesday, October 26th
Reminders feature	Tuesday, November 2nd
AJAX Implementation	Tuesday, November 9th
Addition of Social Media Feed from RPI union	Tuesday, November 16th
Finalizing and Project Review	Tuesday, November 23rd
Final Presentation and Demo	Friday, December 3rd or Tuesday, December 7th

Site Map


CommuniTea
Resources
images
includes
script.js
style.css
Auth
login
logout
Pages
calendar
about
profile
Backend
database
api
index

Wireframes

Landing Page: On this page, new users will be informed on what our application is about. New users will be able to sign up through this page while existing users will be able to login.

Calendar Page: This is where the main functionality of our application will be. On this page, users will be able to receive updates and join events in the communities they're a part of and add reminders and events for themselves, all compiled together under one calendar.