IST 516: Midterm-Report

Team 3
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Section 2-1: Detailed Design of the Project Idea

As outlined in the planning report, we will develop a web application, CalendarWx, that combines data from a calendar service with data from a weather report provider. The web application will provide the user with the weather conditions during the appointment time at the location specified on his or her calendar. The Google Calendar API is being leveraged since it offers flexibility in coding language as well as handling the user login aspect. We have identified that Google Calendar API allows the development to be accomplished in Python, Java, PHP, NET or Ruby. As the team has depth in Python and Java, we have identified these as our front-runners. Initial development has begun using Python to interact with the Google Calendar API and a Java application was created to interface with the RSS feed from the NWS but we are considering porting the Java code to pure Python. We are currently investigating whether or not we can extract weather information from the NWS using Python.

Commented [1]: Dwayne Jackson:
Is this statement correct

John Tyndall:
Re-worded a little bit, but also not sure how correct.

Section 2-2: Overall Architecture Diagram

CalendarWx will be developed leveraging Google Calendar API and the NWS RSS feed for current weather conditions. For user accounts, as noted in our Planning Report, we will need to leverage a database for management functionality. Our group's comfort level with SQL has been identified as a primary strength. Our group has debated the benefits and limitations of where the application will eventually be hosted. Please reference below for architecture and workflow diagrams.

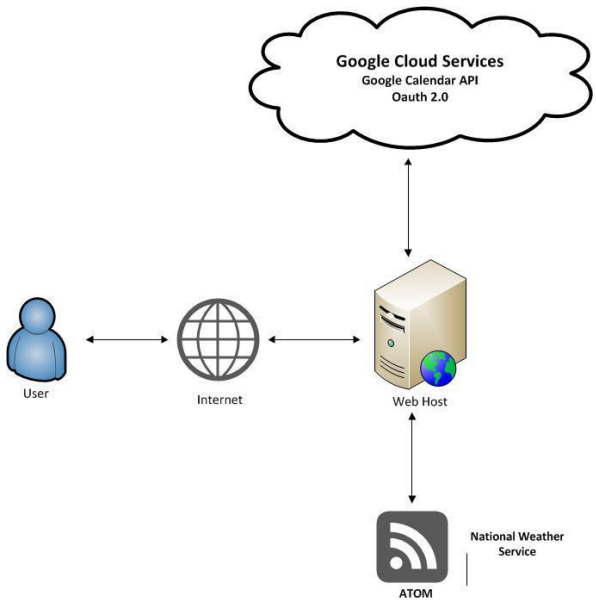

Figure 1: Architecture Diagram

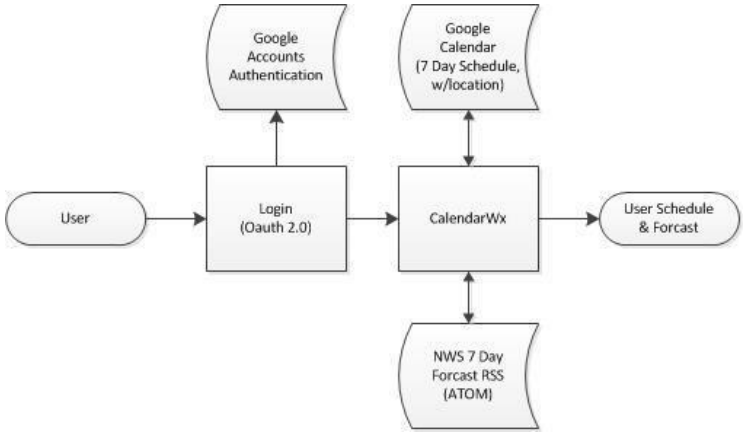

Figure 2: Workflow Diagram

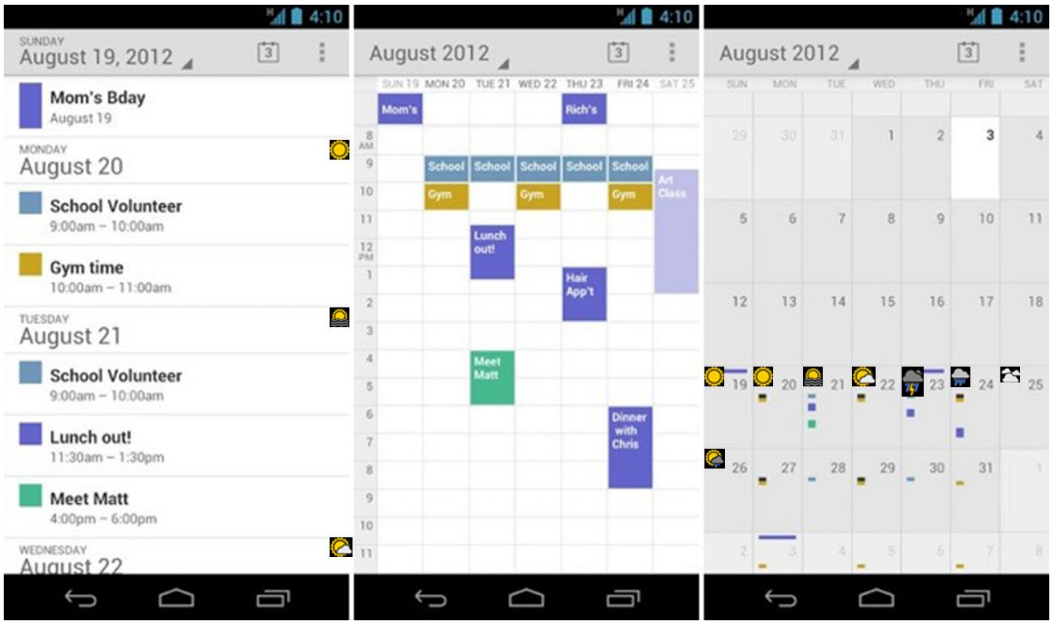

Figure 3: CalendarWx Mockup

Section 2-3: List of XML/Web Technologies Demonstrated

The CalendarWx will be an AJAX-based web app leveraging Google Web Tools (GWT). From planning, we have decided the web app will leverage the following technologies: XML, ATOM, and /or WSDLs. These technologies will be used as we will be retrieving forecast data (National Weather Service) from the National Weather Service (NWS).

The selected platform we wish to use to connect the calendar to the ATOM/RSS feed will be Google Calendar API. The Google Calendar API was selected because we want our application to have a sound integration with the calendar. “Sites or applications that want deeper integration with Google Calendar can

leverage the Google Calendar API (Google Developers site)." Additionally, as noted on (Google Developers site), "the Google Calendar API uses JSON data objects instead of the GData legacy clients as of version 3.0."

Section 2-4: Features of the App

As discussed previously in our planning for our web app, CalendarWx will have the primary features listed below. The team has not yet identified any additional features/functionally we wish CalendarWx to have at this point. Depending on time constraints after conducting a proof-of-concept (POC), we may look to include other features/functionality. Additionally, the app's user experience maybe a potential driving factor once POC is completed.

1. Users log into CalendarWx with individual Google Accounts.
2. Users will have the ability to create, delete, edit, and view calendar appointments on their existing Google Calendars.
3. Appointments will display weather information at the appointment's location, as provided by the NWS RSS feed. We assume that each calendar appointment will have specified the "Location" of the appointment. Appointments without a location specified will not have weather information displayed.

Section 2-5: Evaluation

Once major entities for CalendarWx are in a functional state, we can begin our testing and debugging phases. To assist our group in the testing and debugging process, we created a simple testing worksheet to use during the testing/debugging process. This will ensure that the requirements are properly addressed. The worksheet is incorporated within the Appendix of this document.

Section 2-6: Updated Changes from Planning Report

We believe that a comprehensive GWT application is too ambitious for the current amount of time we have to complete the project. We must still allocate time for testing and debugging once development/coding is

complete. Even though we will not create an entire GWT application, we can still demonstrate via CalendarWx the elements we have used in class, such as RESTful calls, RSS subscriber feeds, and interaction with web app APIs.

Section 2-7: Task 2 Meeting log notes

The team has conducted the majority of it communications via email and video chats. We continued to hammer out specifics of the project design. A major discussion point was potentially leveraging the Drupal content management system and a calendar module in order to reduce time. We decided to continue with our original plan of action for technologies outlined in the Planning Report, mainly due to time requirements.

We also found that, due to team members' schedules, it was best to leverage Google Drive to work on the Planning Report and Midterm (i.e., Task 2) report. This allowed everyone to provide input when ideas arose and also to provide an area for continued 360 degree feedback (e.g., commenting features). Overall, the team was able to keep the needed schedule outlined in the Appendix, Overview of Team Members' Responsibilities.

Section 2-8: Project Outline

Please refer to the appendix, Overview of Team Members' Responsibilities for a detailed outline and timeline.

References

Briggs, Jason R. (2012-11-26). Python for Kids: A Playful Introduction to Programming. No Starch Press. Kindle Edition.

Google. “Google Calendar API,” Retrieved November 7, 2013, from https://developers.google.com/google-apps/calendar/

Google. “Google Code Playground,” Retrieved November 7, 2013, from https://code.google.com/apis/ajax/playground/

National Weather Service. “NWS Public Alerts in XML/CAP and ATOM Formats,” Retrieved November 7, 2013, from http://alerts.weather.gov

Appendix A

Overview of Team Members' Responsibilities

Task1	Planning Report	Author(s)	Time Line	Current Status
Part:1 (1-1)	Motivation	All team members contributed	Week of 10/14-10/20	Status: Completed
Part:1 (1-2)	Primary focus of the Web App?	All team members contributed	Week of 10/14-10/20	Status: Completed
Part:1 (1-3)	Major components of the Web App	All team members contributed	Week of 10/14-10/20	Status: Completed
Part:1 (1-4)	How did we arrive at the current design choice?	All team members contributed	Week of 10/14-10/20	Status: Completed
Part:1 (1-5)	What were some alternative design approaches that we considered, but did not use and why?	All team members contributed	Week of 10/14-10/20	Status: Completed
Part:1 (1-6)	High level summary of design/build approach	All team members contributed	Week of 10/14-10/20	Status: Completed
Part:1 (1-7)	Project Outline	All team members contributed	Week of 10/14-10/20	Status: Completed

Part:1 (1-8)	Team Web Page Link: www.personal.psu.edu/kum225/	Kirk	Week of 10/7-10/13	Status: Completed
Task2	**Midterm Report**	All team members	11/17	Status: Completed
Part:2 (2-1)	Detailed design of the project idea	All team members	Week of 11/4-11/10	Status: Completed
Part:2 (2-2)	Overall architecture diagram	All team members	Week of 11/4-11/10	Status: Completed
Part:2 (2-3)	List of XML/Web technologies demonstrated	All team members	Week of 11/4-11/10	Status: Completed
Part:2 (2-4)	Features of the app.	All team members	Week of 11/4-11/10	Status: Completed
Part:2 (2-5)	Evaluation	All team members	Week of 11-11/17	Status: Completed
Part:2 (2-6)	Updated changes from plan report if any.	All team members	Week of 11-11/17	Status: Completed

Part:2 (2-7)	Task 2 Meeting log notes	All team members	Week of 11/4-11/10 and 11/11-11/17	Status: Completed
Task3	**Final Report**	All team members		Status: In progress
Part:3 (3-1)	Final design details How did we arrive at this final design choice?			Status: In progress
Part:3 (3-2)	XML/Web Technologies used			Status: In progress
Part:3 (3-3)	Explanation of "how" each Technology is used/integrated			Status: In progress
Part:3 (3-4)	Implementation details			Status: In progress
Part:3 (3-5)	Testing methodology, analysis, and results			Status: In progress
Part:3 (3-6)	Demo information. Walk through a scenario of how your Web app functions using screenshots or diagrams, or some other appropriate method.			Status: In progress
Part:3 (3-7)	Lessons Learned and Future Developments			Status: In progress

Part:3 (3-8)	Task 3 Meeting log notes			Status: In progress
Task4	**Presentation Video**	All team members		Status: In progress
PowerPoint	Power Point creation/editing			Status: In progress
Video	Video Presentation creation/editing Max 20mins			Status: In progress
Appendix	Table of each individual team member's major and minor responsibilities.	All team members		Status: In progress
References	At least five books and/or refereed articles	All team members		Status: In progress
Editing		All team members		Status: In progress