**Olympics History:**

**A Data Visualization Applicaiton**



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# Summary

On May 12, 2014, Team Thundercats presented our final project for CS235. Our web application uses varying data visualization tools to provide insight into the history of the summer Olympics.

This document provides a brief description of our application including its key features, a source code overview, our presentation methodology as well as a discussion and comparison of five design patterns that were shared between our mobile and web applications.

# Application Overview[[1]](#footnote-1)

It is common for a person to have multiple daily calendars stored on different, disconnected platforms. Managing and visualizing these disparate calendars can be cumbersome and difficult. Our application simplifies this otherwise burdensome task by integrating all of a user’s different calendars into a unified platform where a user can visualize and modify all of his/her calendars through a single, cohesive interface.

In addition to scheduled meetings and appointments, an individual usually must also complete a set of tasks, chores, errands, etc. Our application also integrates the ability to create and manage a user’s tasks in the form of an advanced “to-do list”.

By incorporating into a single platform an individual’s calendar with the tasks s/he must perform, a user is able to easily visualize and prioritize all of his/her daily activities. Therefore, our applications’ integrated approach helps prevent the inefficiencies and issues (e.g. belated completion of tasks) associated with what for most is an unstructured system to daily activity management.

# Application Users

The potential user base for our Olympics history application is very broad. It is intended to cover any user who is interested to know more about the summer Olympics including how different factors have affected medal totals including population size, economics, geopolitics, host city, etc.

# Prototype Presentation

Similar to the approach we used with our web application, our mobile application presentation only had a very small number of slides. A slide-focused presentation can quickly cause the audience to lose interest and/or become distracted. It was our position that a very short presentation followed by a longer demonstration would be more engaging and informative to the audience. Given the very positive feedback we received from both Professor Mak and the class after our web application demo, we saw no need to change our approach for this presentation. Overall, we felt the mobile application presentation was successful and engaged the audience. Our PowerPoint presentation, named “CS235 - Assignment #4 - Mobile Prototype.pptx”, is included with this submission.

We received three specific points of feedback during our presentation. They are summarized below with our comments:

* **Displaying the Current Year:** In our main calendar view, we do not display the year. In one of our earlier versions, we had been displaying the year, but it made the calendar appear too cluttered so we removed it. We understand the user’s desire to see the year, but in the absence of more data from usability testing, we still feel that our decision to leave it off is the right one. However, we agree that the year number should be displayed when the calendar is displaying a month not from the current year. While not implemented in our prototype, we described in our presentation the methodology we would have used which would be to shorten the month’s name to an abbreviation and then display the year with it (e.g. “January 2016” would be shortened to “Jan 2016”).
* **Pressing and Holding on a Date Bringing Up the Appointment Editor:** One user mentioned that if he were to double click or “press and hold” on a date that our application should bring up the appointment creation panel. Our web application demo had this feature, and it was an oversight on our part not including a similar one in this design. While we have a feature that can do a similar thing by clicking on the date then clicking on the appointment creation button, we should have simplified the process to improve the user overall experience.
* **Text Size:** Professor Mak mentioned that when displayed on the projector, the text size appeared small. David explained that this is more an artifact of a deliberately reduced resolution to make the entire simulator window fit on the display. Since none of us have paid the Apple annual subscription fee for developer mode, we are not able to load it on to a phone to verify or otherwise disprove the feedback. Hence, while we acknowledge Professor Mak’s critical viewpoint, we are not able to speak more conclusively on it at this time.

# Design Patterns

Design patterns provide solutions to often encountered software challenges; they serve as best practices that have been refined through proven design experience. In this section, we describe five of the design patterns that were incorporated into our mobile application. Note that this list is not intended to be exhaustive; rather, we selected the same five design patterns from the web application’s report. While not specifically requested in the report requirements, we felt it made for a more insightful and interesting report if we compared and contrasted how we implemented the patterns in the web space versus the mobile space.

## Inlay List Design Pattern

# Source Code and Running the Application

Our application is based off three primary components. They are described below:

**Website Template** – Our application adapted an existing HTML5 template[[2]](#footnote-2).

Throughout the semester, Team Thundercats used Github as our revision control repository. One of Github’s lesser known features is that built into every Github repository is a free web server. To run our application, we recommend that you access our Github page directly. Below is a list of links to each of the applications working pages; note that while the appli

# Data Sources

Multiple different data sources were used to generate the different data visualizations included with our applications. Below is a list of the data sources we used; included with each is a reference to the data visualization where the data set was used:

**Michael Phelps Olympic Medals Won** –

**Total Summer Olympic Medals by Country**:

1. **All Time Olympic Medal Totals by Country**
   1. **Description:** This dataset provides a table listing the number of summer Olympics medals won by each country.
   2. **Data Source:** <http://en.wikipedia.org/wiki/All-time_Olympic_Games_medal_table>
   3. **Data Visualization:**
2. **China’s Olympic Medals Won by Games**
   1. **Description:** This dataset lists the number of gold, silver, and bronze medals won by China at each summer Olympic Games.
   2. **Data Source:** <http://en.wikipedia.org/wiki/China_at_the_Olympics#Medals_by_Summer_Games>
   3. **Data Visualization:**
3. **Olympic Events by Games**
   1. **Description:** This dataset provides a table enumerating the events each summer Olympics. Note that we excluded the 1906 Intercalated Games since that is no longer considered an official Olympic Games by the International Olympic Committee (IOC).
   2. **Data Source:** <http://en.wikipedia.org/wiki/Olympic_sports>
   3. **Data Visualization:**

# Data Visualizations

## Effect of Geopolitics on Olympic Medal Wins – Charting the Rise and Fall of Superpowers

**Web Page Address:** <http://rawgit.com/ZaydH/CS235/master/Final_Project/geopolitics.html>

## If Michael Phelps were a Country

## If Michael Phelps were a Country

## Growth in the Number of Olympic Events

**Web Page Address:** <http://rawgit.com/ZaydH/CS235/master/Final_Project/events.html>

## If Michael Phelps were a Country

1. The “Application Overview” section is very similar to the text in our web application final report. Since the two applications are intended to have been developed theoretically by the same company targeting a single market and user base, we did not see that it made logical sense to have meaningfully different overviews. [↑](#footnote-ref-1)
2. For a link to the template, please see: <http://themeforest.net/item/alexx-multipurpose-html5-theme/3370259> [↑](#footnote-ref-2)