Abstract

This document reviews the previous ten weeks of work done on the Smarter Thunder Lamp. This includes not only a breakdown of problems and solutions the team encountered, but a full week by week breakdown of the work completed. A retrospective is included to discuss what changes need to occur during the next work period.
I. PROJECT PURPOSE AND GOALS
The Smarter Thunder Lamp is a thunder cloud shaped lamp with lightning like functionality. Inspired by a popular art piece by Richard Clarkson, the lamp will need to simulate a thundercloud via the lights inside and a speaker. Richard Clarkson’s lamp is extremely expensive, and thus inaccesable to many people, however, this project will aim to change that, by creating a Smarter Thunder Lamp for a much lesser cost. The Smarter Thunder Lamp also functions as a Bluetooth speaker and light source with a mobile application that can determine these configurations. In the end, the project will produce a novelty product for the home that many people can enjoy.

II. CURRENT STATE
The project is in the state where it is ready to have implementation begin. The past ten weeks has been focused around documentation. A list of requirements for the project has been created. Multiple review documents were created to explore different technology choices for the implementation. Finally, a design document has been created utilizing the decisions made from the technology review pieces. Further refinement needs to be done for the designs of the lower level details, but after that implementation can begin.

III. BLOCKING ISSUES
A. Problems
One of the first issues faced in this project was the meeting setup being used to meet with the client. The group and the client had agreed that skype would be used to conduct weekly meetings to discuss progress on the project, but the first week that there was a meeting, there were technical difficulties with the microphone that the group was using. The client was unable to hear anything on the call, and the meeting was conducted by putting a phone on speaker phone. Another problem that was faced was breaking down the project into different pieces in order to write the technical review document. Even though the group had discussed at length the items that this project would include, separating it into the different pieces posed a problem.

B. Solutions
The issue with skype was resolved by the group members testing the setup right after the meeting ended, finding a solution, and all of the subsequent meetings were conducted through Skype. The confusion about the technical review was resolved by talking to Kirsten and looking through projects from past years. After doing both of these things, the technical review document was able to be written effectively.

IV. RETROSPECTIVE
A. Week One
The first week was primarily an orientation to the class. Groups and projects had not yet been assigned so nothing specific to this project was done. Each member of the group looked through the various project descriptions and selected which projects they were most interested in. Luckily, all the group members assigned to this project listed it as their primary choice in projects.

B. Week Two
The second week allowed the group to meet and begin brainstorming on the project together. The group sent and initial greeting to Mike Kolitz, the projects client. Again, this week was early in the project, so no major work was done. This week was mainly for meeting, greeting, and establishing meeting times that the team could attend regularly.

C. Week Three
The third week was when actual work on the project began. The group worked individually to create drafts of a problem statement for the project. These drafts were to discuss what the project is on a very high level. This required the group to meet with the client to discuss in more detail what was envisioned for the final product.

D. Week Four
During the fourth week the problem statement was completed. The group combined the separated drafts to create one final document. This document was given to the client for approval. After a few minor modifications, the final document was approved.
E. Week Five

This week is when the most refinement on what the project is occurred. The group began working on the requirements document. This is when the team realized that there was much more to the project to discuss than was discussed in the problem statement. Because this document will serve as the contract of completeness when the project is finished, the team wanted to be thorough. To accomplish this, the team met together to write down exactly what they believed is required by the client. During the next meeting with the client, these requirements were negotiated and agreed upon by all members.

F. Week Six

With the requirements fully fleshed out and agreed upon, writing of the document began. This mostly consisted of writing and reviewing. Once it was complete, the document was sent to the client to review. Some minor changes were needed to make the wording of some sections more precise.

G. Week Seven

Week seven begun the exploratory work for the project. The team needed to divide project up into different sections to begin exploring different technologies for implementation. The team was not extremely confident with how to break the project up. For the most part, it was unclear where to create the division lines. After consulting the TA and Kirsten, the team got a better idea of what was expected and was able to successfully divide the project. During this week, the team also revised the problem statement to make it more high level. Originally, the problem statement was much more technical than it needed to be. This was revised to make it more high level and conversationally focused.

H. Week Eight

This week involved the research into the different sections of the project. Luckily, the technologies the team decided to research are well documented. Using the research, drafts for the technology reviews began. The group was able to complete the drafts and begin reviewing each others work.

I. Week Nine

Thanksgiving fell during this week, so once the technology reviews were completed, no new work was begun. The technology reviews were sent to the client for approval in his own time. Instead of beginning new work, the team enjoyed a break and ate a lot of turkey.

J. Week Ten

The first true hands on work begun on the project during this week. After reviewing the different technologies selected, the team began designing the implementation. The design created went into more detail than the previous documents described and utilized the technology choices made previously. The designs currently need to be refined into greater detail, but the higher-level decisions were fleshed out.
## K. Last Development Period

<table>
<thead>
<tr>
<th>Positives</th>
<th>Deltas</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>The team works well together.</td>
<td>Source control methods can be improved upon.</td>
<td>A source control workflow, including methodology for creating branches and dealing with merge conflicts, will be created and followed.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The slack channel created by the group will actually be used, rather than group texting or email.</td>
</tr>
<tr>
<td>The client is accommodating and will let the team make their own</td>
<td>A better method of communication should be implemented.</td>
<td></td>
</tr>
<tr>
<td>creative decisions.</td>
<td></td>
<td>Kirsten will be contacted to ensure that the OneNote has properly been shared with all group members.</td>
</tr>
<tr>
<td>Thus far, all documents have been completed on time.</td>
<td>The number of group members with access to the group OneNote must be</td>
<td></td>
</tr>
<tr>
<td></td>
<td>increased.</td>
<td></td>
</tr>
<tr>
<td>The technologies chosen were found to be well documented with an ample</td>
<td></td>
<td></td>
</tr>
<tr>
<td>supply of resources for help.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The workload has been evenly split up between group members.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Many stretch goals have been laid out, which ensures that the product</td>
<td></td>
<td></td>
</tr>
<tr>
<td>will have as many added features as possible.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>