

Life Cycle Plan (LCP)

TipSure.com

Team 09

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Version History

Date	Author	Version	Changes made	Rationale
09/28/14	RF	1.0	<ul style="list-style-type: none">• Template used from ICSM website, added Section 3: Skills on page 3-4	<ul style="list-style-type: none">• To understand the roles and skills of the development team for future planning and progress
10/11/14	RF	1.1	<ul style="list-style-type: none">• Sections 1-5 completed	<ul style="list-style-type: none">• To understand the current project progress
10/18/14	RF	1.2	<ul style="list-style-type: none">• Sections 6.1 completed, edited sections 3 and 5.	<ul style="list-style-type: none">• To understand development milestones and goals
11/30/14	RF	2.0	<ul style="list-style-type: none">• Sections 6.2-6.3 completed	<ul style="list-style-type: none">• To provide feedback on our CCD results
12/4/14	RF	2.1	<ul style="list-style-type: none">• Sections 1-2 updated	<ul style="list-style-type: none">• Finalize statement of the document

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1. Introduction

1.1 Purpose of the LCP

The purpose of the Life Cycle Plan (LCP) is to provide a framework to understand the responsibilities of the success-critical stakeholders in this project, understand the project timeline holistically, and describe the resources available to the project from a personnel standpoint.

1.2 Status of the LCP

The LCP is currently at the Transition Readiness Review level, version number 2.0. This is the final version that will be discussed and summarized during the Architecture Review Boards. The major changes from the Foundations Commitment Review / Development Commitment Review are:

- Completion of section 6

1.3 Assumptions

The guiding assumption is that this project will last 12 weeks, beginning in September 2014 and ending the first week of December 2014, by which time all deliverables will be complete and given to the client.

2. Milestones and Products

2.1 Overall Strategy

The TipSure Mobile App design is following the Architected Agile process because there is no Non-Development Item or Web service that would fit to most of the core functionality, and because the core requirements are simple enough for us to build from scratch.

Exploration phase

Duration: 09/15/14- 9/22/14

Concept: During this phase, we begin to identify the project model, business workflow, and the results benefit chain in regards to the system and the stakeholders that are a part of this project. During this time we also begin to become acquainted with our client and her view, role, and vision of the system as it develops. We also explore the current system of how TipSure works today.

Deliverables: Client Interaction Report, Progress Report, Project Plan, Program Model, Valuation Commitment Package.

Milestone: Valuation Commitment Review

Strategy: One Incremental Commitment Cycle

Valuation phase

Duration: 09/22/14- 10/13/14

Concept: During this phase, we identify the specific win conditions and success critical stakeholders that will be involved in this project. We further expand on our business case, building an idea of what our target market is, as well as a persona of our potential user base. Lastly, we begin to analyze the technologies we will use at a high-level, and further research the requirements for our system. As a result, we can prototype the most important features, which in our case happened to be the development of the mobile app.

Deliverables: Prototype, Progress Report, Project Plan, WinWin conditions on Winbook, Prototype Presentation

Milestone: Architecture Review Board

Strategy: One Incremental Commitment Cycle

Foundations phase

Duration: 10/13/14- 10/20/14

Concept: During this phase, we identify finalize and prioritize our win conditions for all the success critical stakeholders, and have created a prototype which we will continue to expand on and develop. Furthermore, we begin serious development on the core capabilities required by the client, namely the mobile accessibility and the search functionality.

Deliverables: Operational Concept Design, Life Cycle Plan (1-5), System and Software Architecture Description, Feasibility Evidence Description, Prototype Presentation, Progress Report, Project Plan

Milestone: Architecture Review Board

Strategy: One Incremental Commitment Cycle

Development Phase

Duration: 10/20/14- 12/08/14

Concept: During this phase, we will develop the core functionality of the system required by our client, implement this system, and create the framework that the client can use to maintain the system after the conclusion of our development (i.e. create manuals, etc.)

Deliverables: Mobile application (search functionality, add business functionality), Operational Concept Design, Life Cycle Plan, Systems and Software Architecture Description, Quality Control Results, Training Plan, User Manuals/Documentation

Milestone: Core Capability Drive-Through

Strategy: Two Incremental Commitment Cycle (1 for Development, 1 for Transition)

2.2 Project Deliverables

2.2.1 Exploration Phase

Table 1: Artifacts Deliverables in Exploration Phase

Artifact	Due date	Format	Medium
Client Interaction Report	9/17/2014	.doc, .pdf	Soft copy
Valuation Commitment Package <ul style="list-style-type: none"> • Operational Concept Description (OCD) Early Section • Life Cycle Plan (LCP) Section 3.3 - Skills • Feasibility Evidence Description (FED) Section 3 - Risks 	09/29/2014	.doc, .pdf	Soft copy
Project Plan	Biweekly on Wednesday	.mpp, .pdf	Soft copy
Progress Report	Biweekly on Wednesday	.xls	Soft copy

2.2.2 Valuation Phase

Table 2: Artifact deliverable in Valuation Phase

Artifact	Due date	Format	Medium
Project Plan	Biweekly on Wednesday	.mpp, .pdf	Soft copy
Progress Report	Biweekly on Wednesday	.xls	Soft copy
Prototype	10/2/2014	.com	Website
Prototype Presentation	10/2/2014	.ppt	Prototype Presentation
Winbook Win Conditions	10/2/2014	.com	WinBook

2.2.3 Foundations Phase

Table 3: Artifact deliverable in Foundations Phase

Artifact	Due date	Format	Medium
Operational Concept Design	10/20/2014	.doc, .pdf	Soft Copy
Life Cycle Plan (Sections 1-5)	10/20/2014	.doc, .pdf	Soft Copy
System and Software Architecture Description	10/20/2014	.doc, .pdf	Soft Copy
Prototype Presentation	10/20/2014	.doc, .pdf	Soft Copy
Feasibility Evidence Description	10/20/2014	.doc, .pdf	Soft Copy
Project Plan	Biweekly on Wednesday	.mpp, .pdf	Soft copy
Progress Report	Biweekly on Wednesday	.xls	Soft copy

2.2.4 Development Phase

Table 4: Artifact deliverable in Development Phase

Artifact	Due date	Format	Medium
Functioning Software System	12/8/2014	.doc, .pdf	Soft Copy
Operational Concept Design	12/8/2014	.doc, .pdf	Soft Copy
Life Cycle Plan (Sections 1-6)	12/8/2014	.doc, .pdf	Soft Copy
System and Software Architecture Description	12/8/2014	.doc, .pdf	Soft Copy
Quality Control Results	12/8/2014	.doc, .pdf	Soft Copy
Training Plan	12/8/2014	.doc, .pdf	Soft Copy
User Documentation	12/8/2014	.doc, .pdf	Soft Copy

3. Responsibilities

3.1 Project-specific stakeholder's responsibilities

As of currently, there are no project-specific stakeholder responsibilities.

3.2 Responsibilities by Phase

Table 5: Stakeholder's Responsibilities in each phase

Team Member / Role	Primary / Secondary Responsibility				
	Exploration	Valuation	Foundations	Development-Construction Iteration	Development-Transition Iteration
Name: Jonathan Tuse / Project Manager	Primary Responsibility Progress Report Client Interaction Report Secondary Responsibility Project Plan	Primary Responsibility Bugzilla Repository Secondary Responsibility Create and follow up action items	Primary Responsibility Progress Report Secondary Responsibility Progress Plan	Primary Responsibility Analyze project progress Secondary Responsibility Detail project readiness	Primary Responsibility Finalize project reports Secondary Responsibility Training
Name: Raymond Feng / Life Cycle Planner and IIV&V	Primary Responsibility Project Plan Identify Responsibilities and Skills Secondary Responsibility Progress Report	Primary Responsibility Quality Management Strategy Identify Responsibilities Secondary Responsibility Progress Plan	Primary Responsibility Project Plan Identify Responsibilities and Skills Secondary Responsibility Progress Report	Primary Responsibility Perform Testing Assess Development Iteration Secondary Responsibility Project Plan	Primary Responsibility Perform Testing Assess Development Iteration Secondary Responsibility Project Plan
Name: David Brenn-Cogen / Operational Concept Engineer	Primary Responsibility Analyze Current System Secondary Responsibility Project Plan	Primary Responsibility Identify Objectives, constraints, and priorities Secondary Responsibility Explore alternatives	Primary Responsibility Operational Concept Description Secondary Responsibility Assess operational concept	Primary Responsibility Development of the system Secondary responsibility Testing of the system	Primary Responsibility Testing the system Secondary responsibility Quality control of the system

Name: Aayushi Birla / Prototyper	Primary Responsibility Analyze Current System Secondary Responsibility Explore Alternatives	Primary Responsibility Develop prototype Secondary Responsibility Prepare development and production environment	Primary Responsibility Assess Prototype and components Secondary Responsibility Prioritize capabilities in the system	Primary Responsibility Develop software components Secondary Responsibility Test those components	Primary Responsibility Fixing bugs in the system Secondary Responsibility Quality testing of system
Name: Tej Triveldi / Systems Architect	Primary Responsibility Analyze Current System Secondary Responsibility Explore Alternatives	Primary Responsibility Assess and evaluate NDI candidates Secondary Responsibility Explore Alternatives	Primary responsibility SSAD, Assess system architecture Secondary responsibility UML Model	Primary Responsibility Development of the system Secondary responsibility Testing of the system	Primary Responsibility Testing the system Secondary responsibility Quality control of the system
Name: Nirupama Vaidyanathan / Requirements Engineer	Primary Responsibility Analyze Current System Secondary Responsibility Explore Alternatives	Primary Responsibility Capture and score win-conditions Secondary Responsibility Capture progress of win-win negotiation	Primary Responsibility System and Software Architecture Description Secondary Responsibility Development of system	Primary Responsibility Development of the system Secondary responsibility Testing of the system	Primary Responsibility Testing the system Secondary responsibility Quality control of the system
Name: Linkun Li / Feasibility Analyst	Primary Responsibility Assess and create plans to mitigate risks Secondary Responsibility Explore Alternatives	Primary Responsibility Analyze Business Case Secondary Responsibility Assess and plan to mitigate risks	Primary Responsibility Feasibility evidence description Secondary Responsibility Assess feasibility evidence	Primary Responsibility Development of the system Secondary responsibility Testing of the system	Primary Responsibility Fixing bugs in the system Secondary Responsibility Quality testing of system
Name: Stacy Waite / Client	Primary Responsibility Analyze Current System Secondary Responsibility Client Interaction Report	Primary Responsibility Identify Objectives, constraints and priorities Secondary Responsibility Identify shared vision	Primary Responsibility Specify architecture styles and frameworks Secondary responsibility Assess Prototype	Primary Responsibility Perform Core capabilities drive-through Secondary responsibility Training plan	Primary Responsibility Provide training to administrators Secondary responsibility Perform core capabilities drive-through

3.3 Skills

Team members	Role	Skills
Jonathan Tuse	Project Manager	Current skills: C, Java, HTML, CSS, JQuery Required skills: Project management
Raymond Feng	Life Cycle Planner / IIV&V	Current skills: C++, Java, LaTeX, Cloud, Technical Writing Required skills: MS Project, Project planning, Quality management
David Brenn-Cogen	Operational Concept Engineer	Current skills: Java, C, PHP, Python, HTML, CSS, MySQL Required skills: HTML, CSS, MySQL
Aayushi Birla	Prototyper	Current skills: Java, C, HTML, JSP, XML, CSS, JQuery Required skills: HTML, CSS
Tej Trivedi	Systems Architect	Current skills: C, C++, Java, PHP, JavaScript, HTML, CSS Required skills: JavaScript, HTML, CSS

Team members	Role	Skills
Nirupama Vaidyanathan	Requirements Engineer	Current Skills: C, Java, JQuery, HTML, CSS, SQL Required skills: HTML, CSS
Linkun Li	Feasibility Analyst	Current skills: C, C++, Java, C# Required skills: HTML, CSS

4. Approach

4.1 Monitoring and Control

We are using five different ways to monitor the activity of our project: the use of a project plan, a progress report, tickets created in Bugzilla, a Google Excel document to track all of our upcoming assignments and responsibilities, and lastly, Winbook to facilitate win conditions and win-win negotiation.

4.1.1 Closed Loop Feedback Control

Every Monday, Wednesday, and Friday we have internal meetings to discuss the progress on each of our respective responsibilities. Depending on the results, we shift resources on the team and adjust time spent on the project accordingly.

4.1.2 Reviews

The project manager and IIV&V spend time reading through and quality checking every deliverable before they are posted. They also check in on the members depending on how much work is visually been done, as they can see those documents on the website.

4.2 Methods, Tools and Facilities

Tools	Usage	Provider
WinBook	To facilitate Win-Win negotiations and prioritize win conditions	USC
Microsoft Project	To create our project plan and update it on a biweekly basis	Microsoft
Microsoft Excel	To create and update our progress reports on a biweekly basis	Microsoft
Bugzilla	To document all activity that the team partakes in on a weekly basis	USC
COINCOMO	To estimate resources needed for our project	USC
Visual Paradigm	To create Universal Modelling Language designs for business workflow	Visual Paradigm

5. Resources

For our project, we are estimated 7 team members to finish the system at 7 hrs/week for 12 weeks, which totals to be around 588 hours of effort. The budget is less than \$500 as mandated by the client, but as we are using open-source software that will not be an issue. The major two components in this project are the search module and the mobile application modules. The main programming languages we will be using are HTML and CSS.

Table 6: COCOMOII Scale Driver

Scale Driver	Value	Rationale
PREC	HIGH	The team has worked on several mobile-application projects before along similar lines.
FLEX	LOW	We have a lot of several restrictions involved in this project: from a time perspective (12 weeks) and a programming perspective (must use Google API, use current MySQL database, etc.).
RESL	NOM	The architectural definition is fairly fleshed out; we know the type of software architecture we are responsible for integrating with.
TEAM	NOM	The project team is dedicated to working on this project, but they also have other priorities such as classes, other jobs, etc.
PMAT	NOM	As the project team will be following ICSM processes, which in turn is compatible with CMMI level 2 maturity level

Table 7: COCOMOII Cost Driver

Mobile Application Interface Module		
Cost Driver	Value	Rationale
RELY	LOW	Software doesn't have to be exceptionally robust; client is okay with a low reliability (easily recoverable losses) and is open to upgrading to higher service with hosting provider.
DATA	LOW	Data is fairly small (around 10MB), so testing data will be small, text data at low volume
DOCU	NOM	There is no stringent requirement for specific detailed documentation.
CPLX	LOW	The interface we are to design is fairly straightforward, and very simplistic. The interface is mostly basic operators and web technologies with simple queries and a very basic GUI.
RUSE	LOW	System is not going to be reused for any other projects as of currently, but some of the interface will be used for the rest of the pages in the application.
TIME	NOM	Execution time is not a significant requirement by the client (within 5-10 seconds, which is enough for almost pure text-based interface).
STOR	NOM	There are very small storage constraints; most of what is stored is text data. Current storage usage is <10% of available.
PVOL	LOW	Software is using very common platforms (WordPress, MySQL) that are also fairly user friendly to modify and call on.
ACAP	NOM	We have analysts that have worked with building websites and mobile design before, but they are still fairly young in terms of expertise and experience.
PCAP	NOM	We have programmers that have worked with building websites and mobile design before, but they are still fairly young in terms of expertise and experience.
PCON	VERY HIGH	As our team plans to stick together for the complete year, there should be no personnel issues.
APEX	HIGH	Members on the team are experienced with interfacing with this type of application in the past.
LTEX	HIGH	Members on the team by and large know the language (CSS, HTML) that we are required to use.
PLEX	NOM	While one member is very knowledgeable about the WordPress platform, the rest only have moderate experience working with it.
TOOL	LOW	Use of software tools to debug, check, etc. is not planned for this project
SITE	VERY HIGH	The entire team is sees each other on a regular basis, and works in the surrounding area.

Search Module		
Cost Driver	Value	Rationale
RELY	LOW	Software doesn't have to be exceptionally robust; client is okay with a low reliability (easily recoverable losses) and is open to upgrading to higher service with hosting provider.
DATA	LOW	Data is fairly small (around 10MB), so testing data will be small, text data at low volume
DOCU	NOM	There is no stringent requirement for specific detailed documentation.
CPLX	LOW	Search function we are to design is fairly straightforward, and very simplistic. There are simply a few basic MySQL queries when pulling data.
RUSE	LOW	System is not going to be reused for any other projects as of currently, or in the remainder of the project.
TIME	NOM	Execution time is not a significant requirement by the client (within 5-10 seconds, which is enough for almost pure text-based interface).
STOR	NOM	There are very small storage constraints; most of what is stored is text data. Current storage usage is <10% of available.
PVOL	LOW	Software is using very well documented API, (Google API), that has major upgrades on an annual basis.
ACAP	NOM	We have analysts that have worked with building websites and mobile design before, but they are still fairly young in terms of expertise and experience.
PCAP	LOW	We have programmers that have worked with building websites and mobile design before, but have not really worked with the Google API before.
PCON	VERY HIGH	As our team plans to stick together for the complete year, there should be no personnel issues.
APEX	VERY LOW	Members on the team have not worked extensively with search functions before.
LTEX	NOM	Members on the team have experience with HTML, CSS, and JavaScript to build the search function.
PLEX	LOW	While one member is very knowledgeable about the WordPress platform, the rest only have moderate experience working with it.
TOOL	LOW	Use of software tools to debug, check, etc. is not planned for this project.
SITE	VERY HIGH	The entire team is seen each other on a regular basis, and works in the surrounding area.

Add Business / Form Module		
Cost Driver	Value	Rationale
RELY	LOW	Software doesn't have to be exceptionally robust; client is okay with a low reliability (easily recoverable losses) and is open to upgrading to higher service with hosting provider.
DATA	LOW	Data is fairly small (around 10MB), so testing data will be small, text data at low volume
DOCU	NOM	There is no stringent requirement for specific detailed documentation.
CPLX	LOW	Add function we are to design is fairly straightforward, and very simplistic; just a form that stores text information and sends that information to a MySQL database.
RUSE	LOW	System is not going to be reused for any other projects as of currently. The form function may be reused for a similar module.
TIME	NOM	Execution time is not a significant requirement by the client (within 5-10 seconds, which is enough for almost pure text-based interface).
STOR	NOM	There are very small storage constraints; most of what is stored is text data. Current storage usage is <10% of available.
PVOL	LOW	Language and software we're using is using very common (WordPress, MySQL); these are also fairly well documented to use. Major upgrades on an annual basis or longer.
ACAP	NOM	We have analysts that have worked with building websites and mobile design before, but they are still fairly young in terms of expertise and experience.
PCAP	NOM	We have programmers that have worked with building websites and mobile design before.
PCON	VERY HIGH	As our team plans to stick together for the rest of the semester, there should be no personnel issues.
APEX	HIGH	Members on the team are experienced with interfacing with this type of submission form in the past.
LTEX	NOM	Many members on the team have used these languages before (CSS, HTML, JavaScript).
PLEX	LOW	While one member is very knowledgeable about the WordPress platform, the rest only have moderate experience working with it.
TOOL	LOW	Use of software tools to debug, check, etc. is not planned for this project.
SITE	VERY HIGH	The entire team is sees each other on a regular basis, and works in the surrounding area.

Mobile Application's Overview COPSEMO

Scale Factor 18.74 Schedule (SCED)

+ Subcomponent - Subcomponent(s) More Actions ...

X	Name	Size	Labor Rate (\$/Month)	EAF	Langu...	NOM Effort DEV	EST Effort DEV	PROD	COST	INST COST	Staff	Risk
<input type="checkbox"/>	Mobile Interface	1,500	0.0	0.32	Non...	4.82	1.56	95...	0.00	0.00	0.3	0.0
<input type="checkbox"/>	Search	500	0.0	0.42	Non...	1.61	0.67	74...	0.00	0.00	0.1	0.0
<input type="checkbox"/>	Add Business module	500	0.0	0.36	Non...	1.61	0.59	85...	0.00	0.00	0.1	0.0

Estimation

Total Lines Of Code: 2,500 Hours/PM: 152.0

Estimated	Effort	Schedule	PROD	COST	INST	Staff	Risk
Optimistic	2.26	4.75	1105.90	0.00	0.00	0.5	
Most Likely	2.83	5.10	884.72	0.00	0.00	0.6	0.0
Pessimistic	3.53	5.48	707.78	0.00	0.00	0.6	

According to our results, it appears that it is estimated that the project would be completed in five to six months assuming a 1 person workload, working on the project for approximately 152 hours a month. This is a total of around 535 person-hours spent using the pessimistic calculations. Since we have a team of 7, each whom are spending approximately 40 hours a month on this project (10 hours a week), this equates to approximately 840 person-hours over 12 weeks. From this perspective, given the more pessimistic calculations of 535 hours, we should be able to complete the project within the limited timeframe of 12 weeks (840 team person-hours).

6. Iteration Plan

6.1 Plan

During the upcoming iteration, the major milestone to be addressed is the core-capability drive-through (CCD). In this milestone, we will address and demonstrate the core capabilities of our system to the panel and the client, and receive feedback on whether we were successful in terms of delivering a system with the core functionality in place. Specifically for our project, we will be demonstrating the search function, the mobile interface, and the application form modules, which are the three capabilities the client have said were requirements.

6.1.1 Capabilities to be implemented

Table 8: Construction iteration capabilities to be implemented

ID	Capability	Description	Priority	Iteration
CC-1	Mobile Application Interface	Create a mobile interface for TipSure visitors on mobile by way of creating a web app	10	1
CC-2	Search function	Searches TipSure database for relevant businesses according to search input	8	1
CC-3	Form module	Allow users to submit questions and add businesses using a form	8	1

6.1.2 Capabilities to be tested

Table 9: Construction iteration capabilities to be tested

ID	Capability	Description	Priority	Iteration
CC-1	Mobile Application Interface	Create a mobile interface for TipSure visitors on mobile by way of creating a web app	10	1
CC-2	Search function	Searches TipSure database for relevant businesses according to search input	8	1
CC-3	Form module	Allow users to submit questions and add businesses using a form	8	1

For this upcoming milestone, we are only going to focus on the core capability functions and testing them to make sure that they work. All other features and modules are considered as secondary, and as such, provided that we have time after making sure the core capabilities works as the client intends, only then would we begin to test other capabilities.

6.1.3 Capabilities not to be tested

ID	Capability	Description	Priority	Rationale
CC-4	Tip Calculator	Users can calculate tips using the app	6	Not core capability
CC-5	Load times	Application should load data within 5-10 seconds	6	Depends on search and mobile app interface
CC-6	Travel Guide	Users can download travel guides	4	Not core capability
CC-7	Social media linking	Share and link application using Facebook, Twitter, etc.	4	Not core capability

6.1.4 CCD Preparation Plans

The people who will be involved in the core capability drive-through are the client and 3-4 additional users of the system (these could be any person). We will ask them to use their smartphones, or, in the situation that they do not have one, will lend them our smartphones to use for the duration of the CCD.

We will first thoroughly test our application ourselves by going through every core capability to make sure that the users will receive an error-free or near error-free application. To test it, we will have them use the data that is duplicated from TipSure's database, and give them a simple instruction to search for a business on their mobile devices. We will give them an opportunity to search for businesses that are already in the database by giving them example businesses to search for, and allow them to search for whatever they like. After allowing them to perform 5 or more searches, we will give them a feedback form, which asks them to rate the usability of each of the core capabilities on a scale of one to five. We will also ask for additional feedback comments.

Assuming that our feedback on average rates our core capabilities each as 3.0 and higher, we will consider our core capabilities successful, and use the feedback to address whatever errors, bugs, or usability issues there may be.

6.2 Iteration Assessment

6.2.1 Capabilities Implemented, Tested, and Results

In terms of the capabilities that were tested and implemented, the three main core capabilities were all implemented and tested prior to the core capabilities drive through, as well as during the core capabilities drive through by the client. They all passed the tests as specified in the Test Plan and Cases documentation, and CC-1, testing the core capability of the mobile application interface was mainly tested by the client during the CCD itself, seeing as the client was the sole indicator of whether or not our design was appropriate, and we were presenting the application to her for the first time.

Table 10: Capabilities implemented, tested, and results

ID	Capability	Test Case	Test Results	If fail, why?
CC-1	Mobile Application Interface	N/A	Pass	N/A
CC-2	Search function	TC-01	Pass	N/A
CC-3	Form module	TC-02	Pass	N/A

6.2.2 Core Capabilities Drive-Through Results

In regards to the three sections and the demo of the mobile application (of which all three above core capabilities were delivered at the time), the client mostly commented on our design of the application. The search results and form submissions were thoroughly tested by the client as well, and they operated in an appropriate fashion (no additional feedback besides the fact that it was well-done).

For design, the mobile application needed to have consistent font, font color, and font size between the headings for the forms as well as the paragraphs of the text. There should also be a green border all around the page (ideally the same color as the TipSure logo). There should also be some white space under the logo in the white space, and there should be an “empty” response when there are no search results for a specific query. In addition, the search footer should redirect to the main page such that when clicking it, users can quickly search again as necessary. The “Contact Us” page should have also have a smaller textbox: currently it takes up too much space, and there should be a popup on successful submission.

There were also a few colons, semi-colons, and parentheses that the client wanted to remove, as well as a few extraneous spaces that could be moved or removed.

6.3 Adherence to Plan

The iteration ran largely according to the plan described in our project planner, and we did not run over our budget. There were, however, a few extraneous bugs that we did not foresee as well as additional feedback by the client that we will still have to implement. We are planning to use

the time after the core capabilities drive-through, but before our final delivery date to implement these additional, light requests for the client.

In the future and if we were to go through this iteration again, we would certainly involve our client earlier in our design process, and gotten her feedback earlier. This way, it would have been more likely that she could have raised the same feedback during the CCD, but earlier, allowing us to act on those responses and consequently and possibly more quickly act on them.