Life Cycle Plan (LCP)

Cash Doctor 3.0

Team 12

Steven Helferich: Project Manager Kenneth Anguka: IIV&V Xichao Wang: Tester Alisha Parvez: Developer Ekasit Jarussinvichai: Developer Le Zhuang: Developer Shreya Sharma: Tester Danny Lee: Tester

02/07/2015

Version History

Date	Author	Version	Changes made	Rationale
09/29/14	Steven Helferich	1.0	Completed section 3.3	To evaluate exploration phase requirements
10/13/14	Alisha Parvez	2.0	Updated Sections 1-5	 To make an estimate if we can complete the project with the given resources.
				• All milestones added up to the completion for valuation phase
				• To prepare for foundation phase
10/18/14	Alisha Parvez	2.1	Updated Section 5	Better COCOMO estimation
				 Minor changes in overall strategy
11/22/14	Alisha Parvez	3.0	Updated Section 6	Adding Section 6.1 for ARB DCR
12/5/14	Alisha Parvez	3.1	Updated COCOMO	Updated COCOMO schedule according to the changes suggested during ARB DCR
02/07/15	Alisha Parvez	3.2	Changes made after ARB DCR	Changes in team members
			for Rebaselined DCR	 Changes in responsibility
				• Changes in capabilities
04/01/15	Alisha Parvez	4.0	Updated Section 6.2	• Updated Section 6.2.1 and 6.2.2 after CCD

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1. Introduction

1.1 Purpose of the LCP

The LCP helps in identifying tasks and their corresponding timelines.

The LCP also lists down all the milestones and artifacts delivered according to the phases.

It lists out the strategies to be followed in the project and also the skills required by each team member.

The LCP is documented to provide details as to what is the status of the project and what is the future plan. It lists down the tools and resources being used in the project.

It also defines each stakeholder's responsibilities according to different phases.

In a nutshell, LCP improves the quality of the project by proper planning and also reduces the risk exposure.

1.2 Status of the LCP

The status of the LCP is currently at the Rebaselined Development Commitment Package version number 3.2. This is the version that will be delivered to the client. The major changes from Foundations phase are changes in team members, changes in responsibility, inclusion of iteration plan for the new semester and the strategy for development phase.

1.3 Assumptions

- The duration of the project is 24 weeks, which are 12 weeks in fall 2014 and 12 weeks in spring 2015.
- The project involves 8 personnel resources.
- Team meetings are held each week to discuss on the future tasks of the project.

2. Milestones and Products

2.1 Overall Strategy

This project is following Architected Agile ICSM process. The milestone, deliverables according to each phase are:

Exploration phase

Duration: 09/14/14- 10/01/14

Concept: The team meets with the client and discuss the requirements. The team figures out the

skills needed for this project. It also analyses the current system.

Deliverables: Valuation Commitment Package, Client Interaction Report, Project Reports and

Plans, Weekly Effort Report, program model, business plan and results chain.

Milestone: Valuation Commitment Review **Strategy**: One Incremental Commitment Cycle

Valuation phase

Duration: 10/01/14- 10/20/14

Concept: The team evaluates the risks and prioritize the requirements with the help of winwin negotiations. After that, the high risk item was chosen for prototyping. Both the approaches were followed – horizontal prototyping and vertical prototyping. The horizontal prototype included basic UI design and the vertical prototype included a simple functional demo of a high risk item, i.e. OCR working on android operating system.

Deliverables: Draft Foundations Commitment Package, Foundations Commitment Package, Initial Prototype, Project Reports and Plans, Weekly Effort Report.

Milestone: Foundations Commitment Review **Strategy**: One Incremental Commitment Cycle

Foundations phase

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

Concept: The team will assess the project status. The changes in requirements will be analyzed, and corresponding adjustments will be made. An NDI component will be assessed and development software architecture will be designed. Discussions will be done with CashDoctor, Inc. technical lead Lorin Morar to work on the CashDoctor APIs etc. Besides, actual functional prototypes will be built. Meetings will continue. Efforts will be reported. Work on OCR will be done so as to create a functional prototype that could work on iOS as well.

Deliverables: Draft Development Commitment Package, Development Commitment Package, Initial Prototype, Project Reports and Plans, Weekly Effort Report.

Milestone: Development Commitment Review **Strategy**: One Incremental Commitment Cycle

Rebaselined Foundations Phase

Duration:12/12/2014-02/11/2015

Concept:

In this phase, the team will rebaseline prototypes, prioritize requirements, focus on key risk

items.

Deliverable: Rebaselined Development Commitment Package

Milestone: Rebaselined DCR ARB

Strategy: One Incremental Commitment Cycle

Development phase - Construction Iteration

Duration:02/11/2015-04/08/2015

Concept:

In this phase, the development team should keep detailing project plan and recording project progress and emphasize on implementing the system and performing tests. Such a construction process should be iterated several times in this period of time. Besides, several milestones will be walked through in this phase, which includes core capability drivethrough and transition readiness review.

Deliverable: Transition Readiness Review Package, Draft Transition Readiness Review

Package

Milestone: Transition Readiness Review, Core Capability Drivethrough

Strategy: One Incremental Commitment Cycle

Development phase - Transition Iteration

Duration:04/08/2015-04/30/2015

Concept: In this stage, the development team should perform system transition by providing maintenance information, tutorial session, technical support, as well as user menu which covers different user roles. The milestone of this phase is operational commitment review, which would directly lead to the final product release.

Deliverable: Operational Commitment Review Package, Transition manual, Source code

Milestone: Operation Commitment Review **Strategy**: One Incremental Commitment Cycle

2.2 Project Deliverables

2.2.1 Exploration Phase

Table 1 Artifacts Deiverables in Exploration Phase

Artifact	Due date	Format	Medium
Client Interaction Report	9/19/2014	.doc, .pdf	Soft copy
Valuation Commitment Package	09/29/2014	.doc, .pdf	Soft copy
• Life Cycle Plan (LCP) Early			
Section			
• Feasibility Evidence Description			

(FED) Early Section			
Project Effort	Every Monday	Text	Bugzilla
Project Plan	Every two weeks on	.mpp	Soft copy
	Wednesday		
Progress Report	Every two weeks on	.xls	Soft copy
	Wednesday		
Program model, business model,	09/21/2014	.docx	Soft copy
results chain diagram			

2.2.2 Valuation Phase

Table 1: Artifact deliverable in Valuation Phase

Artifact	Due date	Format	Medium
Prototype presentation	10/03/2014	.ppt	Soft copy
Draft Foundations Commitment Package	10/13/2014	.doc,.pdf	Soft copy
Foundations Commitment Package	10/20/2014	.doc, .pdf	Soft copy
Project Effort	Every Monday	Text	Bugzilla
Project Plan	Every two weeks on Wednesday	.mpp	Soft copy
Progress Report	Every two weeks on Wednesday	.xls	Soft copy

2.2.3 Foundations Phase

Table 2: Artifacts Deliverables in Foundation Phase

Artifact	Due date	Format	Medium
Drafts Development Commitment	12/01/2014	.doc, .pdf	Soft copy
Package			
Operational Concept			
Description (OCD)			
Feasibility Evidence			
Description (FED)			
• Life Cycle Plan (LCP)			
System and Software Applies styre Description			
Architecture Description (SSAD)			
• Prototype report (PRO)			
Test Plan and Cases(TPC)			
Development Commitment	12/08/2014	.doc, .pdf	Soft copy
Package			
 Operational Concept 			
Description (OCD)			
 Feasibility Evidence 			
Description (FED)			
• Life Cycle Plan (LCP)			
System and Software			
Architecture Description			
(SSAD)			
Prototype report (PRO) To the Prototype report (PRO)			
• Test Plan and Cases(TPC)	F 1	Tr. 1	D '11
Project Effort	Every Monday	Text	Bugzilla
Project Plan	Every two weeks on	.mpp	Soft copy
	Wednesday		
Progress Report	Every two weeks on	.xls	Soft copy
	Wednesday		

2.2.4 Rebaselined Foundations Phase

Table 3: Artifacts Deliverables in Rebaselined Foundation Phase

Artifact	Due date	Format	Medium
Drafts Development Commitment	12/01/2014	.doc, .pdf	Soft copy
Package			
 Operational Concept 			
Description (OCD)			

 Feasibility Evidence Description (FED) Life Cycle Plan (LCP) System and Software Architecture Description (SSAD) Prototype report (PRO) Test Plan and Cases(TPC) Development Commitment Package Operational Concept Description (OCD) Feasibility Evidence Description (FED) Life Cycle Plan (LCP) System and Software Architecture Description (SSAD) Prototype report (PRO) Test Plan and Cases(TPC) 	12/08/2014	.doc, .pdf	Soft copy
Project Effort	Every Monday	Text	Bugzilla
Project Plan	Every two weeks on Wednesday	.mpp	Soft copy
Progress Report	Every two weeks on Wednesday	.xls	Soft copy

2.2.5 Development Phase

Table 4: Artifacts Deliverables in Development Phase

Artifact	Due date	Format	Medium
Transition package	TBD	TBD	TBD
Project Effort	Every Monday	Text	Bugzilla
Project Plan	Every two weeks on	.mpp	Soft copy
	Wednesday		
Progress Report	Every two weeks on	.xls	Soft copy
	Wednesday		

3. Responsibilities

3.1 Project-specific stakeholder's responsibilities

The stakeholders only include client, user, maintainer, developer and IIV & V, i.e., the typical stakeholders of CSCI577ab

3.2 Responsibilities by Phase

Table 5: Stakeholder's Responsibilities in each phase

Team	Primary / Secondar	y Responsibility			
Member /	Exploration	Valuation	Foundations	Development-	Development
Role				Construction	- Transition
	- ·	-	-	Iteration	Iteration
Name: Rob	Primary	Primary	Primary	Primary	Primary
Stehlin	Responsibility	Responsibility	Responsibility	Responsibility	Responsibilit
Role: Client	- Explain scope and	- Assess work	- Provide	- Test system	y
	primary	artifacts and	feedback for	development modules	- Accept the
	requirement - Contribute to the	provide feedback	prototypes	- Provide	training - Prepare for
	win conditions	- Identify		feedback of	system
	- Clarify the	shared vision,		system features	transition
	problems from	goal, and		system reatures	transition
	development team	concepts			
	de veropinent team	concepts			
Name: Alisha	Primary	Primary	Primary	Primary	Primary
Parvez	Responsibility	Responsibility	Responsibility	Responsibility	Responsibilit
Role:	-Plan project life	-Plan project	-Provide detail	-Develop	y
Developer,	cycle phases	life cycle	project plan	support plan	-Develop
Life Cycle	- create project plan	phases	-list deliverables	- create project	Transition
Planner	- List deliverables	- List	- create project	plan	plan
	- Identify skills	deliverables	plan		-Deliver final
		- create project	-Estimate		project
	Secondary	plan	project effort		artifacts
	Responsibility	- Identify	using		- create
	Check if the	responsibilities	COINCOMO		project plan
	requirements are		-identify		
	feasible.	Secondary	development		
		Responsibility	iteration		
		Assess plans			
		to mitigate			

		risks	Secondary Responsibility -Assess and evaluate feasibility of NDIProvide feasibility evidence for NDI		
Name: Ekasit Jarussinvichai (Alan) Role: Requirements Engineer, Prototyper, Implementer	Primary Responsibility Develop Requirement Definition Secondary Responsibility Research for NDI	Primary Responsibility Assess and prioritize requirements Secondary Responsibility Build horizontal and vertical Prototypes	Primary Responsibility Assess NDI, Conduct risk assessment plan	Primary Responsibility Build the system	Primary Responsibilit y Deploy and transit the system
Name: Kenneth Anguka Role: Verification and Validation Engineer, Requirements Engineer, Tester	Primary Responsibility -Review the project artifacts -Manage Project Quality Secondary Responsibility Develop Requirement Definition	Primary Responsibility -Review the project artifacts -Manage Project Quality Secondary Responsibility Assess and prioritize requirements	Primary Responsibility -Review the project artifacts -Manage Project Quality Secondary Responsibility Assess NDI, Conduct risk assessment plan	Primary Responsibility - Verify and validate work products Secondary Responsibility Build the system	Primary Responsibilit y - Verify and validate work products Secondary Responsibilit y Deploy and transit the system

NT T	n.	I D •	ъ.	ъ.	n ·
Name: Le	Primary	Primary	Primary	Primary	Primary
Zhuang(Olive	Responsibility	Responsibility	Responsibility	Responsibility	Responsibilit
r)	Identify the system	Specify		D 1 0 4	y
Role:	concept,	architectural	Assess system	Develop System	D 1
Feasibility	develop vision and	styles, patterns	architecture		Develop
Analyst,	usage	and			system, fix
System and	G 1	frameworks	Secondary		defects
Software	Secondary		Responsibility		
Architect	Responsibility	G 1	T1		
	Analyze current	Secondary	Identify system		
	system	Responsibility	and software		
		Capture win-	requirements		
		win	definition		
		negotiations,			
Nama: Chraria	Primary	Drimary	Drimary.	Primary	Primary
Name: Shreya Sharma	Responsibility	Primary Responsibility	Primary Responsibility	Responsibility	Responsibility
Role: System	Identify the system	Specify	Responsibility		
and Software		architectural	A again arintom	Develop System	Develop
Architect,	concept,		Assess system architecture	1 ,	system, fix
Requirements	develop vision and	styles, patterns and	architecture		defects
Engineer	usage	frameworks			
Eligilieei		Hameworks			
	Secondary		Secondary		
	Responsibility	Secondary	Responsibility		
	responsibility	Responsibility	Responsibility		
	Analyze current	Capture win-	Identify system		
	system	win	and software		
		negotiations,	requirements		
		nogonamono,	definition		
Name: Steven	During a surv			Ī	i e
	Primary	Primarv	Primary	Primary	Primary
Heijerich	Primary Responsibility	Primary Responsibility	Primary Responsibilities	Primary Responsibilities	Primary Responsibilit
Helferich Role: Project	Responsibility -Facilitate Client-	Primary Responsibility -Assess and	•	Responsibilities	Responsibilit
Role: Project	Responsibility	Responsibility	Responsibilities	Responsibilities - Support	Responsibilit y
Role: Project Manager,	Responsibility -Facilitate Client- Team interaction	Responsibility -Assess and prioritize	Responsibilities - Conduct risk assessment and	Responsibilities	Responsibilit y - Deploy and
Role: Project Manager, Operational	Responsibility -Facilitate Client- Team interaction for understanding	Responsibility -Assess and	Responsibilities - Conduct risk assessment and address major	Responsibilities - Support development	Responsibilit y
Role: Project Manager,	Responsibility -Facilitate Client- Team interaction for understanding of operational	Responsibility -Assess and prioritize requirements	Responsibilities - Conduct risk assessment and	Responsibilities - Support development team	Responsibilit y - Deploy and
Role: Project Manager, Operational Concept	Responsibility -Facilitate Client- Team interaction for understanding	Responsibility -Assess and prioritize requirements -Facilitate	Responsibilities - Conduct risk assessment and address major	Responsibilities - Support development team - Document	Responsibilit y - Deploy and
Role: Project Manager, Operational Concept	Responsibility -Facilitate Client- Team interaction for understanding of operational concept elements - Document team	Responsibility -Assess and prioritize requirements -Facilitate client-team interactions to	Responsibilities - Conduct risk assessment and address major	Responsibilities - Support development team - Document work - Build the	Responsibilit y - Deploy and
Role: Project Manager, Operational Concept	Responsibility -Facilitate Client- Team interaction for understanding of operational concept elements - Document team work and progress	Responsibility -Assess and prioritize requirements -Facilitate client-team interactions to prioritize	Responsibilities - Conduct risk assessment and address major	Responsibilities - Support development team - Document work	Responsibilit y - Deploy and
Role: Project Manager, Operational Concept	Responsibility -Facilitate Client- Team interaction for understanding of operational concept elements - Document team work and progress - Identify system	Responsibility -Assess and prioritize requirements -Facilitate client-team interactions to	Responsibilities - Conduct risk assessment and address major	Responsibilities - Support development team - Document work - Build the	Responsibilit y - Deploy and
Role: Project Manager, Operational Concept	Responsibility -Facilitate Client- Team interaction for understanding of operational concept elements - Document team work and progress - Identify system concept and	Responsibility -Assess and prioritize requirements -Facilitate client-team interactions to prioritize requirements	Responsibilities - Conduct risk assessment and address major	Responsibilities - Support development team - Document work - Build the	Responsibilit y - Deploy and
Role: Project Manager, Operational Concept	Responsibility -Facilitate Client- Team interaction for understanding of operational concept elements - Document team work and progress - Identify system concept and develop vision and	Responsibility -Assess and prioritize requirements -Facilitate client-team interactions to prioritize requirements Secondary	Responsibilities - Conduct risk assessment and address major	Responsibilities - Support development team - Document work - Build the	Responsibilit y - Deploy and
Role: Project Manager, Operational Concept	Responsibility -Facilitate Client- Team interaction for understanding of operational concept elements - Document team work and progress - Identify system concept and develop vision and usage	Responsibility -Assess and prioritize requirements -Facilitate client-team interactions to prioritize requirements	Responsibilities - Conduct risk assessment and address major	Responsibilities - Support development team - Document work - Build the	Responsibilit y - Deploy and
Role: Project Manager, Operational Concept	Responsibility -Facilitate Client- Team interaction for understanding of operational concept elements - Document team work and progress - Identify system concept and develop vision and	Responsibility -Assess and prioritize requirements -Facilitate client-team interactions to prioritize requirements Secondary Responsibiliti	Responsibilities - Conduct risk assessment and address major	Responsibilities - Support development team - Document work - Build the	Responsibilit y - Deploy and

Name: Xichao Wang(Clark) Role: Operational Concept Engineer, Life Cycle Planner	Primary Responsibility: Meet with client and understand what does current system looks like, including current business workflow, current infrastructure, etc. And establish detail information about requirements from clients about the new system. Secondary Responsibility:	Primary Responsibility : Evaluate the relationship of current system and new system; establish the element relationship of new system and new system business workflow.	Primary Responsibility: figure out how components interoperate with each other to provide the desired capabilities. Secondary Responsibility: tailor the OCR for adopting with other components.	Primary Responsibilities - Support development team - Life Cycle Plan Document work Secondary Responsibility Build the system	Primary Responsibilit y - Deploy and transit system Secondary Responsibilit y Build the system
Name: Danny Lee Role: Quality Focal Point, Tester	an appropriate schedule.			Primary Responsibility Test individual modules	Primary Responsibilit y Deploy and transit the system

3.3 Skills

Table 5: Skills

Team members	Role	Skills
Steven Helferich	Project Manager	Current: Java, HTML5/CSS,
		Bootstrap, JS/jQuery, Python,
		Matlab
		Description de Australia (OC DID
		Required: Android, iOS, PHP, MySQL
Kenneth Anguka	IIV&V	Current: C, C++, Java,
Treimeta / Ingaka	II v a v	Embedded and Real Time
		Systems, Python
Xichao Wang	Operational Concept Engineer	Current: Java, C++, Python,
		Matlab
		Required: PHP,
		HTML,MySQL, JS,
41:1 B	Tie G I Di	Backbone.js, Boostrap
Alisha Parvez	Life Cycle Planner	Current: Java, C++, C,
		Python, JS, HTML5, MYSQL
		Required: Bootstrap, jQuery
Ekasit Jarussinvichai	Requirements Engineer	Current: Java, C++,
		HTML/CSS, VBA, Oracle, JS
		Required: PHP, JSON,
		MySQL, Backbone.js,
		Bootstrap, Cordova, Winbook
Le Zhuang	Feasibility Analyst	Current: Java, Python, C,
		HTML/CSS, Matlab
		Required: Bootstrap, PHP,
		MySQL, JS, JSON, jQuery,
		Backbone.js,
Shreya Sharma	Software Architect	Current: Testing, Web and
		Mobile, HTML5/CSS3,
		Bootstrap, JS
Danny Lee	Quality Focal Point	Current: HTML, CSS,
		JavaScript
		Required: Backbone.js,
		Selenium

4. Approach

4.1 Monitoring and Control

- -The effort spent on the project is being recorded on Bugzilla.
- -The number of lines of code is logged on as project report every two weeks.
- -Communication with the client is being done through Winbook and emails.
- -Commitment review is done before moving into each phase.

The overall strategy is reported through project plan every two weeks.

Closed Loop Feedback Control

The team internally communicates through emails and google drive to keep everyone updated. The team also has team meeting every week to discuss about what we did in the previous week and what we are supposed to do next week.

4.1.1 Reviews

ARB: This is a review that we perform with instructors and TAs to analyze our project progress. Team Meeting: Every Monday, the on-campus team has group meeting discussing about the progress and to-dos. The den-student is kept updated through mails and google drive documents. Bugzilla: We have maintained Bugzilla to trace our progress.

4.2 Methods, Tools and Facilities

Table 6: Tools being used

TOOLS	USAGE	PROVIDER
Bugzilla	Tracks project progress	TA
Winbook	Keeps track of the information resulting from negotiations with client, win conditions and issues raised	TA
Microsoft Visio	Documents OCD workflow	Microsoft
Microsoft Office	Documents editing, sheets, presentations etc	Microsoft
Visual Paradigm	Captures UML and auto generate SSAD	Visual Paradigm International
COINCOMO	Estimates the software developing cost	USC CSSE
Effort Report	Records the total weekly working hours on the project	USC CSSE
MPP	Makes the project plan	Microsoft
Project Report	Records lines of code	Microsoft
Balsamiq mockups	For prototyping	Balsamiq
Tesseract OCR	To implement OCR	Google

5. Resources

The following conditions were used to estimate the cost of our system, CashDoctor 3.0 Mobile App.

- 1. This project has no budget for our development efforts, while the software is provided and tools are free.
- 2. The duration of the project is 12 weeks in CSCI577a
- 3. The duration of the project is 12 weeks in CSCI577b.
- 4. There are eight team members.
- 5. There are three modules in this system.
 - a. Search module
 - b. Share module
 - c. Networking module
- 6. Programming language is JavaScript
- 7. The SLOC is estimated by prototyper

Table 7: COCOMO Scale Factor

Scale Driver	Value	Rationale
PREC	Nominal	This is not very similar to the projects that the team has developed before, so it is somewhat unprecedented
FLEX	Nominal	The client is open to discussions with the development team
RESL	High	There is only one risk item(OCR) with some uncertainity.
TEAM	High	The stakeholders don't have experience in working together as a team but are very collaborative and have strong commitments to achieve the goals of the project
PMAT	Nominal	The goals are consistently achieved CMMI level 2

Table 8: Module lists and SLOC of each module

No.	Module Name	Brief Description	SLOC	REVL
1	Search	For searching doctors according to various filters	1650	10%
2	Share	For sharing invoices by entering manually or through OCR	1815	10%

the groups.	0%	1870	Creating groups and adding people to the groups.	Networking	4
-------------	----	------	--	------------	---

Table 9: Cost drivers for search module

Cost Driver	Value	Rationale
RELY	Nominal	This module is important but if it goes wrong, it won't affect the system very much. There are more important modules than this.
DATA	High	This module is pretty much the database for the website, very high data cost drive
DOCU	Nominal	Because the development process follows ICSM, the document for life-cycle needs is normal.
CPLX	Nominal	Lots of database table joins needed to use the search module.
RUSE	Low	It is going to be reused for the future projects.
TIME	Nominal	This module stays there all the time, execution time depends on the amount of visitors.
STOR	Nominal	It will not take much of the storage place since it is just a search module.
PVOL	High	Very stable, the platform will stay the same
ACAP	High	Team members are highly capable to work on requirements and designs.
PCAP	High	Programmers are capable, efficient and thorough. They are able to communicate and cooperate very well.
PCON	Very High	We have 8 team members in CSCI577a that are continuing to CSCI577b as well.
APEX	Nominal	The average experience of the team members is about one year.
LTEX	Nominal	Most of the tools are new to our team, but are easy to learn
PLEX	Nominal	The platform is somewhat new to our team, but it is not difficult to learn.
TOOL	Nominal	Use of strong, mature, moderately integrated tools

SITE	Very High	Most teammate can meet at least once a week and communicate through calls and emails.
SCED	Nominal	The schedule is fixed for 24 weeks in Fall

Table 10: Cost drivers for share module

Cost Driver	Value	Rationale
RELY	High	This module is very important, if it goes wrong, it will have a considerable effect on the system.
DATA	Very High	This module is pretty much the database for the website, very high data cost drive
DOCU	Nominal	Because the development process follows ICSM, the document for life-cycle needs is normal.
CPLX	Nominal	Lots of database table joins needed to use this module.
RUSE	Low	It cannot be used for other projects.
TIME	Nominal	This module stays there all the time, execution time depends on the amount of visitors.
STOR	Nominal	It will take some of the storage place since it shares the invoices of the users.
PVOL	High	Very stable, the platform will stay the same
ACAP	High	Team members are highly capable to work on requirements and designs.
PCAP	High	Programmers are capable, efficient and thorough. They are able to communicate and cooperate very well.
PCON	Very High	We have 8 team members in CSCI577a that are continuing to CSCI577b as well.
APEX	Nominal	The average experience of the team members is about one year.
LTEX	Nominal	Most of the tools are new to our team, but are easy to learn
PLEX	Nominal	The platform is somewhat new to our team, but it is not difficult to learn.

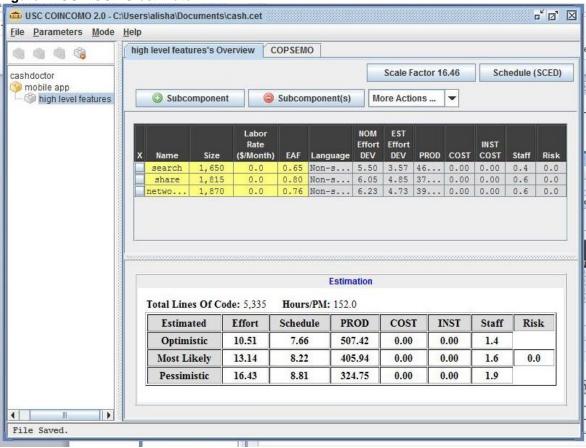
TOOL	Nominal	Use of strong, mature, moderately integrated tools
SITE	Very High	Most teammate can meet at least once a week and communicate through calls and emails.
SCED	Nominal	The schedule is fixed for 24 weeks in Fall

Table 11: Cost drivers for networking module

Cost Driver	Value	Rationale
RELY	Nominal	This module is important but if it goes wrong, it won't affect the system very much. There are more important modules than this.
DATA	High	This module is pretty much the database for the website, very high data cost drive
DOCU	Nominal	Because the development process follows ICSM, the document for life-cycle needs is normal.
CPLX	High	This is high because it is going to involve lots of submodules.
RUSE	low	It is going to be reused for the future projects.
TIME	Nominal	This module stays there all the time, execution time depends on the amount of visitors.
STOR	Nominal	It will not take much of the storage place since it is just a networking module.
PVOL	High	Very stable, the platform will stay the same
ACAP	High	Team members are highly capable to work on requirements and designs.
PCAP	High	Programmers are capable, efficient and thorough. They are able to communicate and cooperate very well.
PCON	Very High	We have 8 team members in CSCI577a that are continuing to CSCI577b as well.
APEX	Nominal	The average experience of the team members is about one year.
LTEX	Nominal	Most of the tools are new to our team, but are easy to learn

PLEX	Nominal	The platform is somewhat new to our team, but it is not difficult to learn.
TOOL	Nominal	Use of strong, mature, moderately integrated tools
SITE	Very High	Most teammate can meet at least once a week and communicate through calls and emails.
SCED	Nominal	The schedule is fixed for 24 weeks in Fall





Total number of weeks = 24 weeks(2 semesters).

One person can work 10 hours per week.

According to COINCOMO,

The COINCOMO estimation effort calculated from the 3 modules gives an effort of 13.36 PM for pessimistic approach

16.43 PM * 152 hrs/PM= 2497.36 hr to do the work

10 hrs/week/person *24 weeks= 240 hr/ person

2497.36 hrs/240 hrs/person=10.40 person

For optimistic approach,

Life Cycle Plan (LCP)

10.51 PM * 152 hrs/PM= 1597.52 hr to do the work 10 hrs/week/person *24 weeks= 240 hr/ person 2497.36 hrs/240 hrs/person=6.7 person For most likely approach, 13.14 PM * 152 hrs/PM= 1997.28 hr to do the work 10 hrs/week/person *24 weeks= 240 hr/ person 1997.28 hrs/240 hrs/person=8.3 person

Therefore, we will be able to complete the project within time if we work a little extra.

6. Iteration Plan

6.1 Plan

There are two iterations in the development phase. The first iteration(Construction iteration) is subdivided into two iterations, one for Core Capability which includes all three modules, testing, and quality assurance and the second one is Full Capability Iteration including improving products, process, and providing user manuals all features.

Another iteration will be Transition iteration where traning and installation will be done. After the Core Capability Iteration, implement team and clients would check and record the accomplishments and take use of it as the input for the second Development Iteration. At the same time, they would also test the core capability and make use of it as the input for the next iteration. After the Core Capability Iteration, there is a milestone, CCD and after the Full Capability Iteration, there would be a milestone, TRR.

6.1.1 Capabilities to be implemented

The clients must have all three capabilities and the implement team plan to develop them in the first iteration.

ID Capability Description **Priority** Iteration Search For searching doctors according to various filters 1^{st} 2 Share For sharing invoices by entering 1 manually or through OCR 1st Creating groups and adding people to the 3 Networking 3 groups.

Table 12: Capabilities to be implemented

6.1.2 Capabilities to be tested

Table 13: Construction iteration capabilities to be tested

ID	Capability	Description	Priority	Iteration
1	Search	For searching doctors according to	2	1^{st}
		various filters		
2	Share	For sharing invoices by entering	1	1 st
		manually or through OCR		
4	Networking	Creating groups and adding people to the	3	1 st
		groups.		

6.1.3 Capabilities not to be tested

All capabilities will be tested after two iterations.

6.1.4 CCD Preparation Plans

The stakeholders who will be involved in our Core Capability Drive-through are:

- 1. Client
- 2. Development Team
- 3. Mentor: USC 577b 15 spring Professor and TAs

CCD Preparation Plan:

- Before the CCD:
- a. Developer Preparation
- 1. Presentation
- 3. Template for report
- 4. Prepare draft User Manual
- b. Client Preparation
- 1. Contact with the client and make appointment
- 2. Prepare for user scenarios for CCD
- During the CCD
- a. Present our system with core capability
- b. Let the client try to use our system and get feedback
- c. Discuss about acceptance test
- d. Discuss about Client's expectation of system and transition
- e. Discuss about risk management
- After the CCD
- a. Improve system according to clients' feedback
- b. Write CCD report
- c. Revise User Manual
- d. Revise acceptance test plan

6.2 Iteration Assessment

6.2.1 Capabilities implemented, tested, and results

Table 14: Capabilities implemented, tested and results

ID	Capability	Test Case	Test Results	If fail, why?
		TC-04-01		
		TC-10-01		
		TC-10-02		
1	Search	TC-10-03	Pass	-
		TC-10-04		
		TC-14-02		
		TC-01-01		
2	Share	TC-07-01	Pass	_
2		TC-13-01	1 455	-
3	Networking	TC-05-01	Pass	-

6.2.2 Core Capabilities Drive-Through Results

Table 15: Core capabilities drive-through

ID	Capability	Method
1	Search	Drive-through
2	Share	Drive-through
3	Networking	Drive -through

Table 16:Core capabilities drive-through results

Win Condition	Comments
WC_3076	 Likes the white background and solid colors. Text size big enough Likes side bar Wants profile picture to link to edit profile page as a shortcut Really likes the edit profile form. Not too much space between the input fields Keep rows close together. More info on the page. Likes long scrolling forms More direction on the dashboard. need popout to explain what to do next put Rob in the system. add him into everyone's network upon new user registration On an empty network. put a search button onto the network Likes look and feel of provider profile page Make division between search results more clear. Remove red line. Smaller thumbnails might also help.

Win Condition	Comments
WC_3083	 In the share page: change ordering of input fields. Put image first. Service name, code, price, THEN PPO. On share page, add a little info icon that opens a modal with descriptive information on it. Change Share name to Price Share. Potentially have a type of share selection that builds the share form for exactly what you're trying to share. Options for just a quote. A rating is more like a price share and telling how the service. Add a follow button on the share page. On provider profile page make data rows thinner. Use same font size as the provider's name.

Win Condition	Comments	
WC_3084	 Want to connect with phone from search list. Have a field with phone number that links to phone. Add # of stars to the search results and # of invoices. Add email to provider row and have it link to email 	

Win Condition	Comments	
WC_3088	 Add search button straight to the network page well. On network, make a red dot on the provider's row if there has been an update. 	

Win Condition	Comments	
WC_3087	Updating picture works on the dashboard.	