Life Cycle Plan (LCP)

Flower Seeker

Team 05

Name	Roles
Eder Figueroa	Primary Role: Project Manager/ Implementer. Secondary Role: Tester.
Sophia Wu	Primary Role: Life cycle planner/ Tester Secondary Role: Implementer
Doris Lam	Primary Role: IIV&Ver/ Quality Focal Point/ Implementer. Secondary Role: Tester.
Hiram Garcia	Primary Role: IIV&Ver/ Quality Focal Point/ Implementer. Secondary Role: Tester.

05/01/2013

Version History

Date	Author	Version	Changes made	Rationale
10/03/12	BY, CZ	1.0	• Add Section 3.3	• Initial draft Section 3.3
10/13/12	BY, CZ	2.0	• Update Section 3.3, Add Section 1	• Correct errors in Section 3.3 from LCP_VCP_F12a_T05_V1.0. Initial draft Section 1
10/22/12	YT, EF, SW,BY, CZ	3.0	• Update Section 3.3, Add Section 3.1, 3.2, 4, 5	• Correct errors in Section 3.3 from LCP_FCP_F12a_T05_V2.0. Initial draft Section 4, 5
11/05/12	YT, EF, SW,BY, CZ	3.1	• update of section 2,3,4,5	• Correct errors from LCP_FCP_F12a_T05_V3.0 and make some modifications based on the recent project development trend
11/26/12	YT, EF, SW,BY, CZ	3.2	• Rename the document • Correct the mistakes and errors pointed by TA and den student in FCP LCP document.	• Draft DCP
12/06/12	YT, EF, SW,BY, CZ	4.1	• add section 6 till 6.1.3 • update of section 2 and 3	• Update and correct errors on draft DCP in section 2,3 and 6.
12/10/12	YT, EF, SW,BY, CZ	4.2	• update of section 3	• correct and update some of the team members' responsibility and role in several phases
02/03/13	SW	4.3	• revise cover	• reform development team
02/11/13	SW	4.4	• revise section 2.1, 3.2, 3.3 and 5	• reevaluated all aspects of the team
02/13/13	SW	4.5	• revise section 2.1, 2.2, 3.2, 3.3 and 6.1.1-6.1.3	• Re-assign roles' responsibilities, reschedule the iteration duration and task and change team members' skills.
02/20/13	SW	4.6	• Revise section 3.3	• Assign missing trainer role to some team members
03/30/13	SW	4.7	• Add section 6.1.4, 6.2.1 and 6.3	• Describe CCD preparation plan
05/01/13	SW	4.8	• Modify section 6.2.1	• Change the testing result after last iteration

Table of Contents

Table of Tables

Table of Figures

1. Introduction

1.1 Purpose of the LCP

The purpose of LCP document is to show the objective of this project, to show the assumptions this project based on, to show the place where we do this project, to identify responsibilities and skills for each role, to record milestones at each phase, and to record the approaches that are used to achieve these goals.

1.2 Status of the LCP

This is the 3.2 edition of Life cycle plan for Development commitment package. This time we completed section 1-5 of this file and make some modifications on the section1.3, 2.2, 3.2, 4.2, and 5 based on TA's comments and change of project plan.

1.3 Assumptions

(1)The duration of the project is two semester about 24 weeks from 2012 fall to 2013 spring

(2)The team has 2 on-campus students and 2 den students

(3) All clients and other non-student stakeholders are clear about their duty and have the commitment that they will fulfill their job until the end of the project development period.

(4) Students are clear about their duty and have the commitment that they will fulfill their job until the end of the project development period.

(5) Client will provide a server for us to develop the system.

2. Milestones and Products

2.1 Overall Strategy

Figure 1: Architected Agile Process Pattern & Use Single NDI Process Pattern

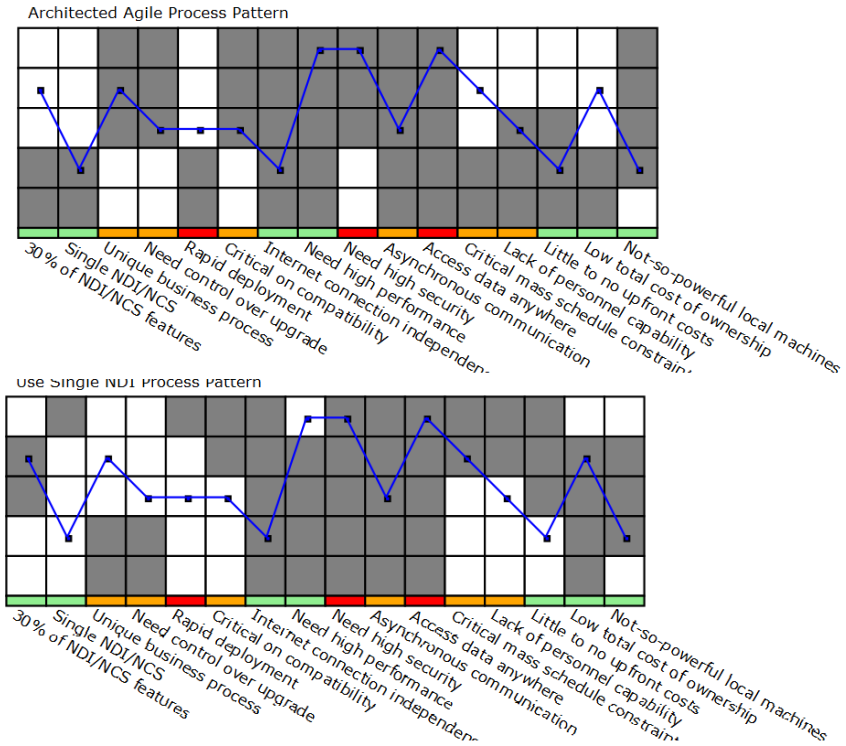
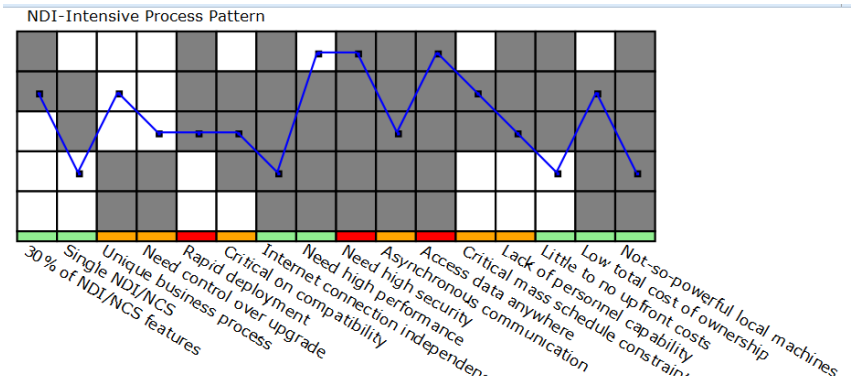
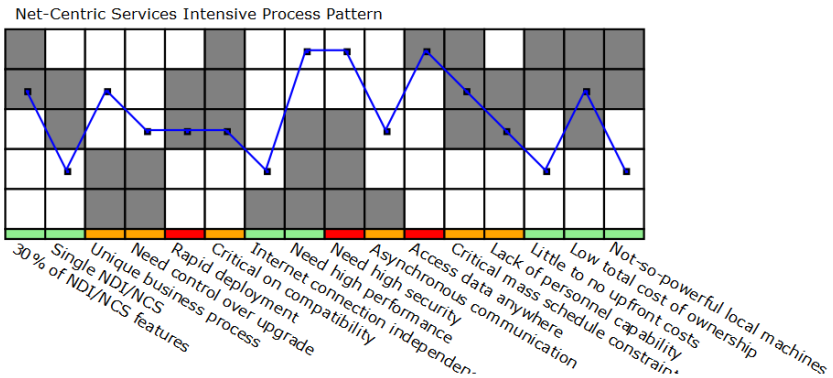


Figure 2: NDI-Intensive Process Pattern & Net-Centric Service Process Pattern





Architected agile is been proved to be the most suitable process pattern for FlowerSeeker. Mainly FlowerSeeker does not use a single NDI/NCS that is going to provide more than 30% of all desired functionality, the reason is that the client wants to personalize almost every single feature and adjust it to her new business flow. Also the project is in some way unique. What makes appealing Flower Seeker is that both florist and customers are going to work altogether without intermediaries, this is different from the current flower ecommerce business work, where florist only sale flowers to the wholesaler. The system design needs to be built to provide high levels of security involving confidentiality, integrity, availability.

The process decision driver allowed us to evaluate characteristics that were not view in previous planning documents and how they could affect the system development in a holistic way for example: unique business process, not so powerful computers, and low budget altogether and not as individual variables.

The project is going to be fully dependent on internet connections, similarly the system need to be able to run in any web-browser that trigger the system in mobile devices, desktop and so on. Architected agile approach can let the development team to build many of these features from scratch with almost 100% customization allowance and requirements satisfaction. Although the system is going to be created from scratch some NCS are going to be included, specially to handle bank-customer communication when a user is paying for a florist arrangement. Also risk management in the other approaches may take longer time for our 24 week course.

Exploration phase

Duration: 09/12/2012- 10/8/2012

Concept: During the Exploration phase, the team set up several meetings to understanding flower business, identifying project operational concept, life cycle plan, and system and software boundary, understanding all success-critical stakeholders, team members' skills, and identifies risks and mitigation plan for each risk.

Deliverables: Valuation Commitment Package

Milestone: Valuation Commitment Review

Strategy: One Incremental Commitment Cycle

Valuation phase

Duration: 10/9/2012- 11/12/2012

Concept: During the Valuation phase, the team prioritizes win conditions, minimum marketable features and capabilities of FlowerSeeker and elaborates use-cases and UI prototypes on all critical functionality. The team continue revise and complete operational

concept, business workflow, creating a draft of system and software architecture, and deciding the process pattern the team should follow.
Deliverables: Foundations Commitment Package
Milestone: Foundations Commitment Review
Strategy: Win-win negotiation, prototype development for critical functionality

Foundation phase

Duration: 11/02/2012 - 12/06/2012
Concept: In this phase, we will first mainly focus to develop the system architecture by define the tech-dependent architecture and make the architecture pattern and frameworks clear.
Deliverables: Development Commitment Package
Milestone: Development commitment review
Strategy: Based on our prototyping and

Rebaselined Foundation phase

Duration: 1/14/13 - 2/15/13
Concept: Since the development team has reformed in current semester that team responsibilities should be reassigned and based on current team size the project modules also be reevaluated.
Deliverables: Rebaselined development commitment package
Milestone: Rebaselined development commitment review
Strategy: revising the previous document and update them based on the changes of the project during the semester break.

Development (construction iteration) phase

Duration: 2/16/13 – 4/19/13
Concept: In this phase, our team will mainly focus on the coding part of the project by buildup the website, database, tracking system and implement all other detail functions of the project.
Deliverables: Initial Operational Capability (IOC) Package, Core Capability Drive-Thru Report, Transition Readiness Review Package
Milestone: Core capability Drive through, Transition Readiness Review
Strategy: Team coding with communications.

Development (transition iteration) phase

Duration: 4/20/13 - 05/03/13
Concept: In the phase, out team will be mainly focused on the transition of the project, which is to train other people to maintain, control and use it.
Deliverables: Support and Transition Set Package.
Milestone: Operation Commitment Review
Strategy: Training

2.2 Project Deliverables

2.2.1 Exploration Phase

Table 1: Artifacts Deliverables in Exploration Phase

Artifact	Due date	Format	Medium
Client Interaction Report	09/19/2012	.doc, .pdf	Soft copy
Valuation Commitment Package • Operational Concept Description (OCD) Early Section • Life Cycle Plan (LCP) Early Section • Feasibility Evidence Description (FED) Early Section	10/03/2012	.doc, .pdf	Soft copy
Evaluation of Valuation Commitment Package	10/08/2012	.xls	Soft copy
Project Effort Report	Every Monday	text	ER system
Project Plan	Every Wednesday	.mpp, .pdf	Soft copy
Progress Report	Every Wednesday	.xls	Soft copy

2.2.2 Valuation Phase

Table 2: Artifact deliverable in Valuation Phase

Artifact	Due date	Format	Medium
Core Foundation Commitment Package • Operational Concept Description (OCD) • Life Cycle Plan (LCP) Section 1 and 3.3 • Feasibility Evidence Description (FED) Section 1 and 5 • Prototype Report (PRO) Initial draft • System and Software Architecture Description (SSAD) Early Section • Supporting Information Document (SID)	10/15/2012	.doc, .pdf	Soft copy
Evaluation of Core Foundation Commitment Package	10/22/2012	.xls	Soft copy
Draft Foundation Commitment Package • Operational Concept Description (OCD) • Life Cycle Plan (LCP) Section 1 and 5 • Feasibility Evidence Description (FED) Section 1 and 5 • Prototype Report (PRO) Initial draft • System and Software Architecture Description (SSAD) Revised Early Section • Supporting Information Document (SID)	10/22/2012	.doc, .pdf	Soft copy

Response to Evaluation of Core Foundation Commitment Package	10/24/2012	text	Bugzilla system
Evaluation of Draft Foundation Commitment Package	10/26/2012	.xls	Soft copy
Foundation Commitment Package • Operational Concept Description (OCD) • Life Cycle Plan (LCP) Section 1 and 5 • Feasibility Evidence Description (FED) Section 1 and 5 • Prototype Report (PRO) Initial draft • System and Software Architecture Description (SSAD) Complete Section 1 and 2 • Supporting Information Document (SID) • Quality Management Plan (QMP) all sections	10/26/2012	.doc, .pdf	Soft copy
Response to Evaluation of Draft Foundation Commitment Package	10/31/2012	text	Bugzilla system
Quality Management Plan (QMP) #1	10/26/2012	.doc, .pdf	Soft copy
Evaluation of Foundation Commitment Package	11/12/2012	.xls	Soft copy
Response to Evaluation of Foundation Commitment Package	11/14/2012	text	Bugzilla system
Project Effort Report	Every Monday	text	ER system
COTIPMO	Every Wednesday	text	COTIPMO system
Project Plan	Every Wednesday	.mpp	Soft copy
Progress Report	Every Wednesday	.xls	Soft copy

2.2.3 Foundations Phase

Table 3: Artifact deliverable in Foundations Phase

Artifact	Due date	Format	Medium
Draft Development Commitment Package • Operational Concept Description (OCD) all sections • Life Cycle Plan (LCP) Section 1 -section 5 • Feasibility Evidence Description (FED) Section 1 - section 5 • Prototype Report (PRO) all sections • System and Software Architecture Description (SSAD) all sections • Quality management plan (QMP) all sections	11/26/2012	.doc, .pdf	Soft copy
Evaluation of draft DC package	12/03/12	.xls	Soft copy
Development Commitment Package • Operational Concept Description (OCD) all sections	12/10/12	.doc, .pdf	Soft copy

• Life Cycle Plan (LCP) Section 1 -section 6.1.3 • Feasibility Evidence Description (FED) Section 1 - section 5 • Prototype Report (PRO) all sections • System and Software Architecture Description (SSAD) all sections • Quality management plan (QMP) all sections • Supporting Information Document (SID) all sections • test plan (TP) section 1, 3 • test plan and case (TPC) section 1, 3			
Response of evaluation of Draft DC package	12/10/12	.xls	Soft copy
Evaluation DC package	12/17/12	.xls	Soft copy
Project Effort Report	Every Monday	text	ER system
COTIPMO	Every Wednesday	text	COTIPMO system
Project Plan	Every Wednesday	.mpp	Soft copy
Progress Report	Every Wednesday	.xls	Soft copy

2.2.4 Rebaselined Foundation Phase

Table 4: Artifact deliverable in Rebaselined Foundations Phase

Artifact	Due date	Format	Medium
Draft Rebaselined Development Commitment Package • Operational Concept Description (OCD) all sections • Life Cycle Plan (LCP) Section 1 -section 6.1.3 • Feasibility Evidence Description (FED) Section 1 - section 5 • System and Software Architecture Description (SSAD) all sections • Quality management plan (QMP) all sections • Supporting Information Document (SID) all sections • test plan (TP) section 1, 3 • test plan and case (TPC) section 1, 3	02/11/13	.doc , .pdf, .vpp	Soft copy
Rebaselined Development Commitment Package(final version for RDCP) • Operational Concept Description (OCD) • Life Cycle Plan (LCP) • Feasibility Evidence Description (FED)	02/20/13	.doc , .pdf, .vpp	Soft copy

• System and Software Architecture Description (SSAD)+UML • Quality management plan (QMP) • Supporting Information Document (SID) • test plan (TP) • test plan and case (TPC)			
Evaluation of RDC Package	02/25/13	.xls	Soft copy
Project Effort Report	Every Monday	text	ER system
COTIPMO	Biweekly Wednesday	text	COTIPMO system
Project Plan	Every Wednesday	.mpp, .pdf	Soft copy
Progress Report	Every Wednesday	.xls	Soft copy

2.2.5 Development(Construction) Phase

Table 5: Artifact deliverable in Development (Construction) Phase

Artifact	Due date	Format	Medium
Initial Operational Capability (IOC) Package • Operational Concept Description (OCD) all sections • Life Cycle Plan (LCP) Section 1 – 6.2.1 and 6.3 • Feasibility Evidence Description (FED) all sections • System and Software Architecture Description (SSAD) all sections +UML • Quality management plan (QMP) all sections • Supporting Information Document (SID) all sections • test plan (TP) all sections • test plan and case (TPC) all sections • Test Procedure and Results (TPR)	04/01/13	.doc , .pdf, .vpp	Soft copy
Evaluation of IOC Package	04/08/13	.xls	Soft copy
Core Capability Drive-Thru Report • Concern logs • Presentation slides • Draft of user's manual • Life Cycle Plan (LCP) Section 6.2	04/10/13	.doc, .pdf, .ppt	Soft copy
Draft TRR • Transition Plan (including Training planning) • User Manual • Support Plan • Training materials (including tutorials and	04/15/13	.doc , .pdf	Soft copy

sample data) • Regression Test Package			
Project Effort Report	Every Monday	text	ER system
COTIPMO	Biweekly Wednesday	text	COTIPMO system
Project Plan	Every Wednesday	.mpp, .pdf	Soft copy
Progress Report	Every Wednesday	.xls	Soft copy

2.2.6 Development(Transition) Phase

Table 6: Artifact deliverable in Development (Transition) Phase

Artifact	Due date	Format	Medium
Support and Transition Set Package • Transition Plan (including Training planning) • User Manual • Support Plan • Training materials (including tutorials and sample data) • Regression Test Package	04/22/13	.doc , .pdf	Soft copy
Evaluation of RDC Package	02/25/13	.xls	Soft copy
Project Effort Report	Every Monday	text	ER system
COTIPMO	Biweekly Wednesday	text	COTIPMO system
Project Plan	Every Wednesday	.mpp, .pdf	Soft copy
Progress Report	Every Wednesday	.xls	Soft copy

3. Responsibilities

3.1 Project-specific stakeholder's responsibilities

In our project, other than typical stakeholders, we also have some project-specific stakeholders as showed in the table 5 below

Table 7: Project-specific stakeholder's responsibilities

Roles	Responsibilities
Lawyer	• Deal with all the legal issues of the system since our system is involving the sale of plants.
Jessica's Mom	• Provide different kinds of design of flowers and occasion models to the develop team so that the develop team can build the web site based on that.

3.2 Responsibilities by Phase

Table 8: Stakeholder's Responsibilities in each phase (Fall 2012)

Team Member / Role	Primary / Secondary Responsibility		
	Exploration	**Valuation**	**Foundations**
Name: **Eder Figueroa** Role: Project Manager & Requirement Engineer	**Primary Responsibility** (1)Identify objectives, constraints, and priorities (2)Record Project Progress (3) Manage team and delegate tasks to team members (4)Lead teams Communicate with clients **Secondary Responsibility** (1) Analyze implementation difficulty (2)Communicate with clients	**Primary Responsibility** (1) Plan the Project (2) Manage team and delegate tasks to team members (3)Record Project Progress **Secondary Responsibility** (1) Develop Requirement definition	**Primary Responsibility** (1) Plan the Project (2) Manage team and delegate tasks to team members (3)Record Project Progress **Secondary Responsibility** (1) Reevaluate requirements add or modify the requirement report if necessary
Name: **Sophia Wu** Role: Life cycle planner& System/software Architect, tester, builder	**Primary Responsibility** (1)Identify responsibilities and skills (2)Make project plan **Secondary Responsibility** (1) Analyze the current System	**Primary Responsibility** (1) Plan for project Lifecycle (2) Identify Milestones and Products (3) Assess Life Cycle Content **Secondary Responsibility** (1) Explore and Define system Architect (2) Explore and Define NDI/NCS	**Primary Responsibility** (1) Plan for project Lifecycle (2) Identify Milestones and Products (3) Assess Life Cycle Content (4) define iteration and support plan **Secondary Responsibility** (1) Describe the architecture, patterns, and frameworks
Name: **Bo Yang** Role: Prototyper& Feasibility Analyst & builder , tester	**Primary Responsibility** (1) Prioritize Capabilities (2) Design prototype **Secondary Responsibility** (1) Analyze the current System	**Primary Responsibility** (1) Design prototype (2) Revise the prototype **Secondary Responsibility** (1)Analyze proposed System (2) Assess and evaluate possible NDI/NCS And Explore Alternatives (3) Provide Feasibility Evidence (4) Analyze, prioritize, and provide plans for risk mitigation	**Primary Responsibility** (1) Revise prototype **Secondary Responsibility** (2) Provide Feasibility Evidence (3) Analyze, prioritize, and provide plans for risk mitigation

Name: **Chen Zhuang** Role: Requirement Engineer& Feasibility Analyst, tester, builder	**Primary Responsibility** (1) Analyze implementation difficulty (2)Communicate with clients **Secondary Responsibility** (3) Analyze the current System	**Primary Responsibility** (1) Develop Requirement definition **Secondary Responsibility** (1)Analyze proposed System (2) Assess and evaluate possible NDI/NCS And Explore Alternatives (3) Provide Feasibility Evidence (4) Analyze, prioritize, and provide plans for risk mitigation	**Primary Responsibility** (1) Reevaluate requirements add or modify the requirement if necessary **Secondary Responsibility** (1) Provide Feasibility Evidence (2) Analyze, prioritize, and provide plans for risk mitigation
Name: **Yao-Sheng Tsai** Role: System/Software Architect& Operational Concept Engineer, tester, builder	**Primary Responsibility** (1) Explore the current system	**Primary Responsibility** (1) Explore and Define system Architect (2) Explore and Define NDI/NCS **Secondary Responsibility** (1) Provide New operational concept of proposed system	**Primary Responsibility** (1) Describe the architecture, patterns, and frameworks **Secondary Responsibility** (1) Find ready-to-use NDI or NCS
Name: **Doris Lam** Role: Integrated Independent Verification & Validation	**Primary Responsibility** (1) Verify and validate work products	**Primary Responsibility** (1) Verify and validate work products	**Primary Responsibility** (1) Verify and validate work products

Table 9: Stakeholder's Responsibilities in each Phase (Spring 2013)

Team Member / Role	Primary / Secondary Responsibility		
	Rebaselined Foundations	**Development-Construction Iteration**	**Development-Transition Iteration**
Name: **Eder Figueroa** Role: Project Manager/ Implementer & Tester /Trainer	**Primary Responsibility** (1) Plan the Project (2) Manage team and delegate tasks to team members (3)Record Project Progress (4) Reevaluate requirements add or modify the requirement report if necessary	**Primary Responsibility** (1) Develop transition plan (2) Access life cycle contents (3)Record Project Progress (4) Develop the project **Secondary Responsibility** (1) Test functions	**Primary Responsibility** (1) Plan the Project (2)Develop support plan (3)Record Project Progress (4) Implemented functions **Secondary Responsibility** (1) Test functions (2) Training (3) Make user manual

Name: **Sophia Wu** Role: Tester/ Trainer & Implementer	**Primary Responsibility** (1) Plan for project Lifecycle (2) Identify Milestones and Products (3) Assess Life Cycle Content (4) define iteration and support plan	**Primary Responsibility** (1) Plan for project Lifecycle (2) Identify Milestones and Products (3) Assess Life Cycle Content (4) Make user manual **Secondary Responsibility** (1) Implemented functions (2) Develop the project	**Primary Responsibility** (1) Plan for project Lifecycle (2) Identify Milestones and Products (3) Test functions (4) Make user manual (5) Training **Secondary Responsibility** (1) Implemented functions
Name: **Doris Lam** Role: IIV&Ver/ Quality Focal Point/ Implementer & Tester/ Trainer	**Primary Responsibility** (1) Verify and validate work products (2) Implement unit integration (3)Implemented functions (4) Develop the project	**Primary Responsibility** (1) Verify and validate work products (2) Implement unit integration (3)Implemented functions (4) Develop the project **Secondary Responsibility** (1) test functions	**Primary Responsibility** (1) Verify and validate work products (2) Implement unit integration (3)Implemented functions **Secondary Responsibility** (1) test functions (2) Training
Name: **Hiram Garcia** Role: IIV&Ver/ Quality Focal Point/ Implementer & Tester/ Trainer	**Primary Responsibility** (1) Verify and validate work products (2) Implement unit integration (3) Implemented functions (4) Develop the project	**Primary Responsibility** (1) Verify and validate work products (2) Implement unit integration (3) Implemented functions (4) Develop the project **Secondary Responsibility** (1) test functions	**Primary Responsibility** (1) Verify and validate work products (2) Implement unit integration (3)Implemented functions **Secondary Responsibility** (1) test functions (2) Training

3.3 Skills

Team members	Role	Skills
Eder Figueroa	Primary Role: Manager/ Implementer. Secondary Role: Tester/Trainer	**Current skills:** Java, OO UML designer , IOS developer, MySQL, Web service developer **Required skills:** EE JAVA development, Spring framework knowledge, JPA, JUNIT communication skills

Sophia Wu	Primary Role: Tester/ Trainer. Secondary Role: Implementer.	**Current skills:** ASP.NET, VB.NET, C#.NET, HTML, SQL server, JavaScript **Required skills:** COCOMO II, EE JAVA development, JUNIT, JPA
Doris Lam	Primary Role: IIV&Ver/ Quality Focal Point/ Implementer. Secondary Role: Tester/Trainer.	**Current skills:** UML, Java, python, developing web apps. **Required skills:** JUnit Test, EE JAVA development, Bugzilla
Hiram Garcia	Primary Role: IIV&Ver/ Quality Focal Point/ Implementer. Secondary Role: Tester/Trainer.	**Current skills:** Debugging Skills, Testing Skills, ASP, C, C++, C#, Java, HTML, JavaScript, Bugzilla, COTIPMO **Required skills:** Java, HTML, COCOMO II, Eclipse, EE JAVA development

4. Approach

4.1 Monitoring and Control

For the FlowerSeeker project, the development team is using the progress report to track especially which activities must to be completed for next week or iteration, the progress report also help to monitor all risk that are happening for each week helping to take earlier actions on them.

4.1.1 Closed Loop Feedback Control

The group is using Google group as a tool to communicate all matter within the team members and to share and keep organized all artifacts. This tool is especially useful because we can send messages for all team members easily

4.1.2 Reviews

Weekly group review: This review is made in different times each week. The development team discusses their problems and the work is evaluated and prioritized

IIV&V: By the den student, all artifacts are review and bugs released for each one of them. This is important for a neutral validation of the artifacts

WinToWin: Negotiations and review in which all values from the SCS. Also help to estimate and prioritize requirements to be done

4.2 Methods, Tools and Facilities

Tools	**Usage**	**Provider**
Balsamiq	This tool helps to create fast prototypes by the developers along with the client. This is especially useful for brainstorming or concept clarification	Corner bistro Demo version
Winbook	Help to set up all win to win condition with all success critical stakeholders. Also to estimate and prioritize requirements	USC
BugZilla	Help to keep track the bug in the development life cycle	USC
Visual Paradigm	Tool use to create all different UML diagram need to reflect requirements and behaviors of the system	USC
Microsoft Project Plan	This tool can help us make detail plan of jobs for next period in weeks	Microsoft and USC
Microsoft Word	We use this tool to write all the document for this project	Microsoft and USC
Google groups	We use this tool to share the files and have group discussions.	Google
Skype	We use this tool for group and client talk meetings	Skype
Adobe Acrobat	We use this tool to submit the required documents to our website	Adobe
COCOMO II (Version 2000.3)	Tool that uses the COCOMO II estimation model for software projects	USC
COPTIMO	Tool that help to estimate delivery schedule and accuracies of the project	USC
Effort Report System	Tool that manage the effort inputs by all project members	USC

5. Resources

- Estimated CSCI577b Effort : 4 team members at 10 hrs./week for 12 weeks
- Total estimated effort:6.0 PM
- Budget information: estimate budget $3000
- Project duration: 12weeks
- Component modules in our development project: Payment, rank & review, order management, searching, user management and product management.
- Programming language used: JAVA

Table 10: COCOMOII Scale Driver

Scale Driver	Value	Rationale
PREC	Nominal	Our project is based on the concept of combining social network, ecommerce and online flower shopping; each system seems familiar for people, but not familiar with the composite system.
FLEX	Nominal	The client clearly defined all the functions she would like to have in system, but system is changeable if development team has better way to implement the functions after discuss with client and be approved.
RESL	Very High	Since ICSM is a risk-based process that we estimate as mostly 90% which is very high value in Architecture/Risk Resolution.
TEAM	High	All of our team members have same goal to help our client to build up this system perfectly that every team member helps each other whenever some other team members have problem with project. And everyone try to meet up to discuss the project as often as possible.
PMAT	Nominal	The development team follows ICSM guidelines, which is compatible to CMMI level 2 maturity levels.

Figure 3: COCOMO II Scale Factors

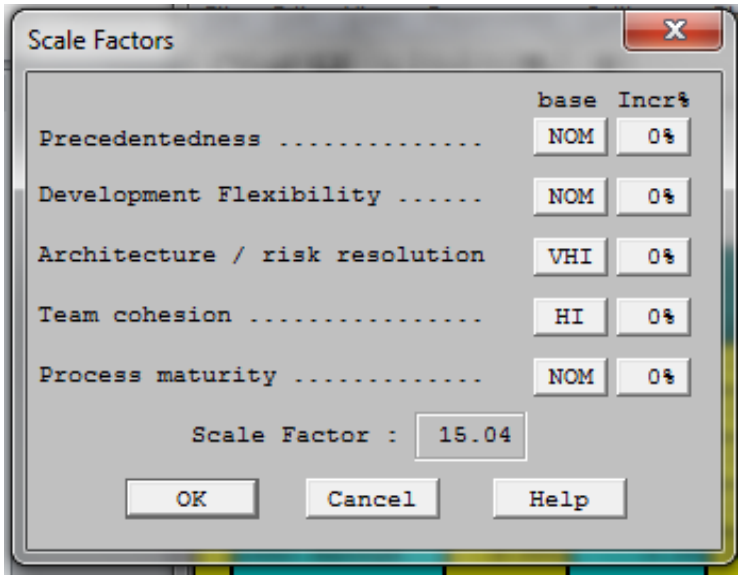


Table 11: COCOMOII Cost Driver-payment

Cost Driver	Value	Rationale
RELY	High	Once the system crashed, online shopper can't use this module to do any purchase, which will result in high financial loss, since the online shopper can just search for items but can't buy the products that they want to purchase.
DATA	Low	The database of payment module is only for storage the account number and payment history, which doesn't need too much space of database.
DOCU	Nominal	All the documents in our project should exactly match to life-cycle needed since there doesn't have stringent requirement for micro-level documentation, but must be adequate enough for further maintenance.
CPLX	Low	In payment module, we will use operations at physical I/O level to implement our project and some distributed processing.
RUSE	Low	There might has somewhere else need to use payment system, so this module is reusable but only across our project since this is a COTS which is original develop by our development team that can't use to any other programs due to there might has some license issues.
TIME	Nominal	In our project, all the modules consume little computations and resources.
STOR	Nominal	The payment module doesn't need to have a large storage to store all data that there has minor storage constraint.
PVOL	Low	In our system, the platforms are stable and are not required update or upgrade frequently.
ACAP	High	Five of six team members have certain extent experience in analysis but not maturity.
PCAP	High	Five of six team members have experience in the programming language that we are going to use in our project.
PCON	Low	Three of six team members may not plan to take CSCI577b.
APEX	Low	There's only one team member has little experience in developing software system, and others just learned from lectures.
LTEX	Nominal	Five of six team members have some experiences in the writing JAVA; each member has about 2 years experiences in average. However, there still one beginner in the development team.
PLEX	Nominal	Every team member has little knowledge of understanding how to make the platform used in our system more powerful.
TOOL	Nominal	We don't use strong, mature integrated software tools in our system; the only tool we use is very basic and moderately integrated software tool.
SITE	Nominal	All team members are in different cities and companies that the team can only hold meeting online.

Figure 4: COCOMO II EAF – payment

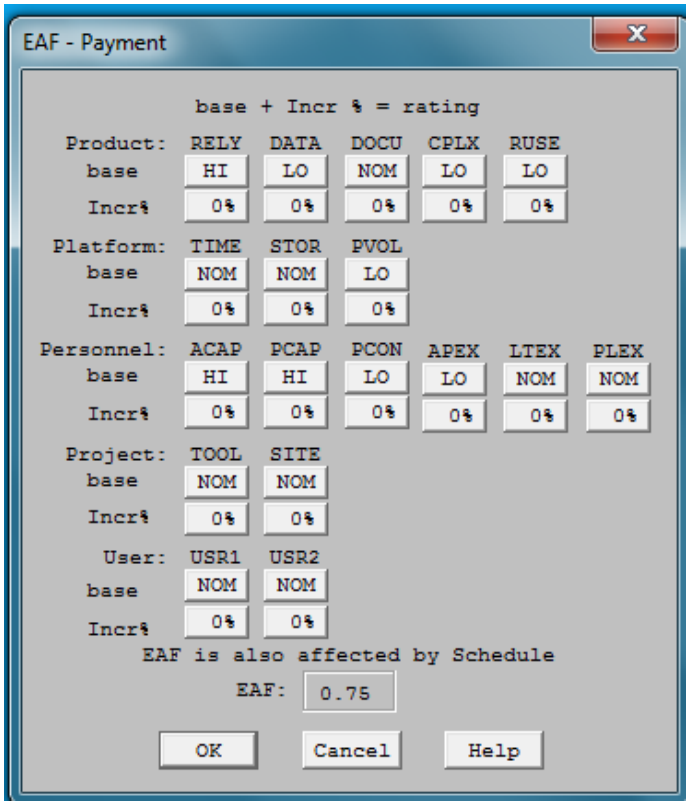


Table 12: COCOMOII Cost Driver- rank & review

Cost Driver	Value	Rationale
RELY	Low	Once the system crashed this module wouldn't affect too much to the system, online shoppers can still do some purchase, also the losses from crash can easily recovery.
DATA	Low	There has some rank & review open source online that we can use it on our project, which it doesn't take too many lines of code.
DOCU	Nominal	All the documents in our project should exactly match to life-cycle needed since there doesn't have stringent requirement for micro-level documentation, but must be adequate enough for further maintenance.
CPLX	Nominal	The rank & review module sometimes use standard statistical routines and only required simple edit and some simple use of widget set.
RUSE	Very Low	This is a customized module so this can only fit on our system, but not for any other project or program usage in the future.
TIME	Nominal	In our project, all the modules consume little computations and resources.
STOR	Nominal	Since there doesn't have large size of data in this module that there only has little storage constraint.
PVOL	Low	In our system, the platforms are stable and are not required update or upgrade frequently.
ACAP	High	Five of six team members have certain extent experience in analysis but not maturity.
PCAP	High	Five of six team members have experience in the programming language that we are going to use in our project.

PCON	Low	Three of six team members may not plan to take CSCI577b.
APEX	Low	There's only one team member has little experience in developing software system, and others just learned from lectures.
LTEX	Nominal	Five of six team members have some experiences in the writing JAVA; each member has about 2 years experiences in average. However, there still one beginner in the development team.
PLEX	Nominal	Every team member has little knowledge of understanding how to make the platform used in our system more powerful.
TOOL	Nominal	We don't use strong, mature integrated software tools in our system; the only tool we use is very basic and moderately integrated software tool.
SITE	Nominal	All team members are in different cities and companies that the team can only hold meeting online.

Figure 5: COCOMO II EAF – rank& review

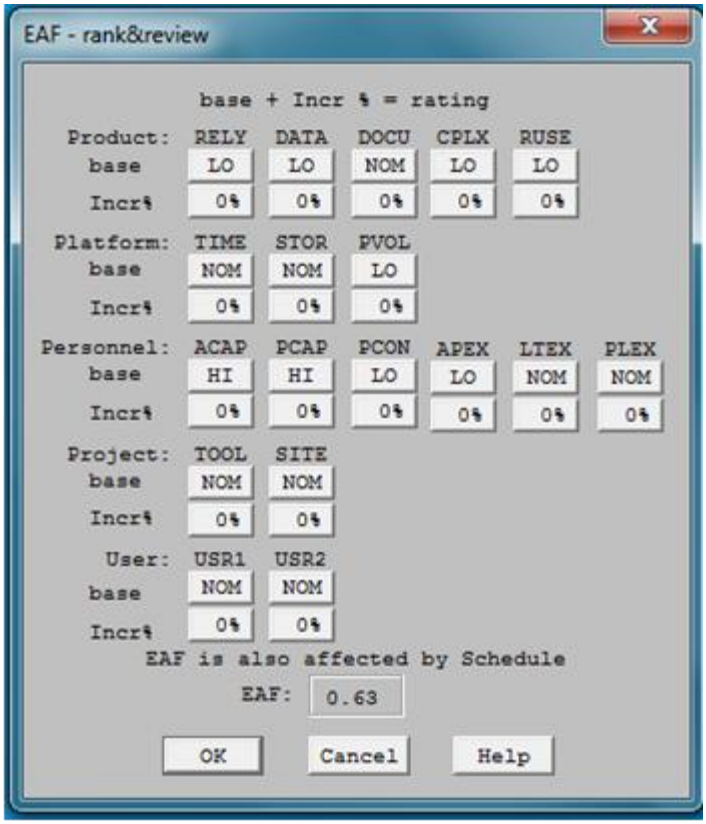


Table 13: COCOMOII Cost Driver- order management

Cost Driver	Value	Rationale
RELY	Nominal	If the system crashed then there will has a large loss since online shopper can't do any purchase at that time.
DATA	Low	The database of order management module is only for storage the account number and order history, which doesn't need too much space of database.
DOCU	Nominal	All the documents in our project should exactly match to life-cycle needed since there doesn't have stringent requirement for micro-level documentation, but must be adequate enough for further maintenance.

CPLX	Low	In order management module, we will use operations at physical I/O level to implement our project and some distributed processing
RUSE	Low	The order management is for managing the orders that can also be used in other projects which would have similar requirement.
TIME	Nominal	In our project, all the modules consume little computations and resources.
STOR	Nominal	The order management module doesn't need to have a large storage to store all data that there has little storage constraint.
PVOL	Low	In our system, the platforms are stable and are not required update or upgrade frequently.
ACAP	High	Five of six team members have certain extent experience in analysis but not maturity.
PCAP	High	Five of six team members have experience in the programming language that we are going to use in our project.
PCON	Low	Three of six team members may not plan to take CSCI577b.
APEX	Low	There's only one team member has little experience in developing software system, and others just learned from lectures.
LTEX	Nominal	Five of six team members have some experiences in the writing JAVA; each member has about 2 years experiences in average. However, there still one beginner in the development team.
PLEX	Nominal	Every team member has little knowledge of understanding how to make the platform used in our system more powerful.
TOOL	Nominal	We don't use strong, mature integrated software tools in our system; the only tool we use is very basic and moderately integrated software tool.
SITE	Nominal	All team members are in different cities and companies that the team can only hold meeting online.

Figure 6: COCOMO II EAF – order management

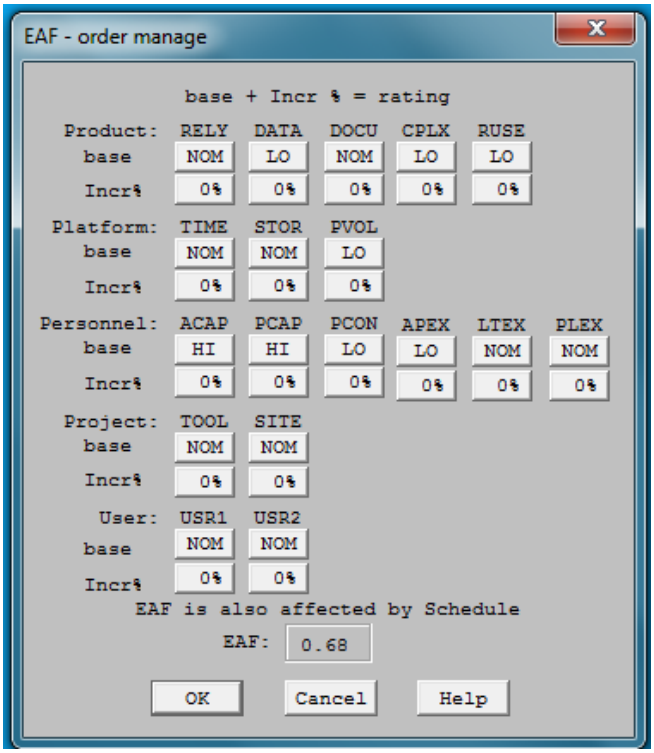


Table 14: COCOMOII Cost Driver - searching

Cost Driver	Value	Rationale
RELY	Nominal	Online shoppers can't search for their desired products or products' provider once the system crashed, but the losses can be easily be recovered and shoppers can still use payment module to pay the order already in shopping cart so it wouldn't cause any financial losses.
DATA	Low	This module doesn't have to store much data; the only work is to sending request and receives the response that we can implement this module by coding. Therefore, D/P is less than 10.
DOCU	Nominal	All the documents in our project should exactly match to life-cycle needed since there doesn't have stringent requirement for micro-level documentation, but must be adequate enough for further maintenance.
CPLX	Nominal	We would use some simple nesting code and simple callbacks/ message passing to operate searching module. Also do I/O at GET/PUT level.
RUSE	Low	Many projects would use this module to search for their desired goods that this module is reusable for looking for products but not for searching some other information.
TIME	Nominal	In our project, all the modules consume little computations and resources.
STOR	Nominal	Due to there do not has lots data to be stored, so wouldn't has too much storage constraint.
PVOL	Low	In our system, the platforms are stable and are not required update or upgrade frequently.
ACAP	High	Five of six team members have certain extent experience in analysis but not maturity.
PCAP	High	Five of six team members have experience in the programming language that we are going to use in our project.
PCON	Low	Three of six team members may not plan to take CSCI577b.
APEX	Low	There's only one team member has little experience in developing software system, and others just learned from lectures.
LTEX	Nominal	Five of six team members have some experiences in the writing JAVA; each member has about 2 years experiences in average. However, there still one beginner in the development team.
PLEX	Nominal	Every team member has little knowledge of understanding how to make the platform used in our system more powerful.
TOOL	Nominal	We don't use strong, mature integrated software tools in our system; the only tool we use is very basic and moderately integrated software tool.
SITE	Nominal	All team members are in different cities and companies that the team can only hold meeting online.

Figure 7: COCOMO II EAF – searching

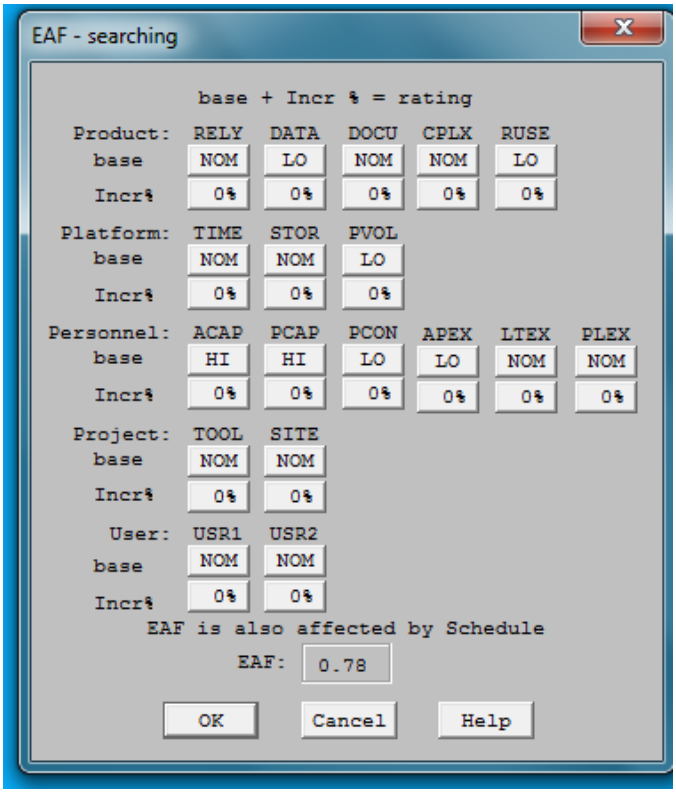


Table 15: COCOMOII Cost Driver – user management

Cost Driver	Value	Rationale
RELY	Nominal	Once the system crashed, system user can't use this module to manage their information; however, the losses are easily recovery and wouldn't affect to any financial loss.
DATA	High	The system will provide our product-providers to upload pictures on their profile, which would impose a large size of database.
DOCU	Nominal	All the documents in our project should exactly match to life-cycle needed since there doesn't have stringent requirement for micro-level documentation, but must be adequate enough for further maintenance.
CPLX	Nominal	The user management module would provide users to upload their multimedia files and data, and also users can do some simply edit to their user page in user management module.
RUSE	Low	This module is based on the concept of user interface that this can also be used to other project which would like to use similar system, but there still has some customized function like multimedia upload that it's only available to reuse across projects.
TIME	Nominal	In our project, all the modules consume little computations and resources.
STOR	Nominal	The system provides users to upload some pictures on their profile; the storage for this module doesn't require too large constraint as videos and pictures in product management does.
PVOL	Low	In our system, the platforms are stable and are not required update or upgrade frequently.

ACAP	High	Five of six team members have certain extent experience in analysis but not maturity.
PCAP	High	Five of six team members have experience in the programming language that we are going to use in our project.
PCON	Low	Three of six team members may not plan to take CSCI577b.
APEX	Low	There's only one team member has little experience in developing software system, and others just learned from lectures.
LTEX	Nominal	Five of six team members have some experiences in the writing JAVA; each member has about 2 years experiences in average. However, there still one beginner in the development team.
PLEX	Nominal	Every team member has little knowledge of understanding how to make the platform used in our system more powerful.
TOOL	Nominal	We don't use strong, mature integrated software tools in our system; the only tool we use is very basic and moderately integrated software tool.
SITE	Nominal	All team members are in different cities and companies that the team can only hold meeting online.

Figure 8: COCOMO II EAF – user management

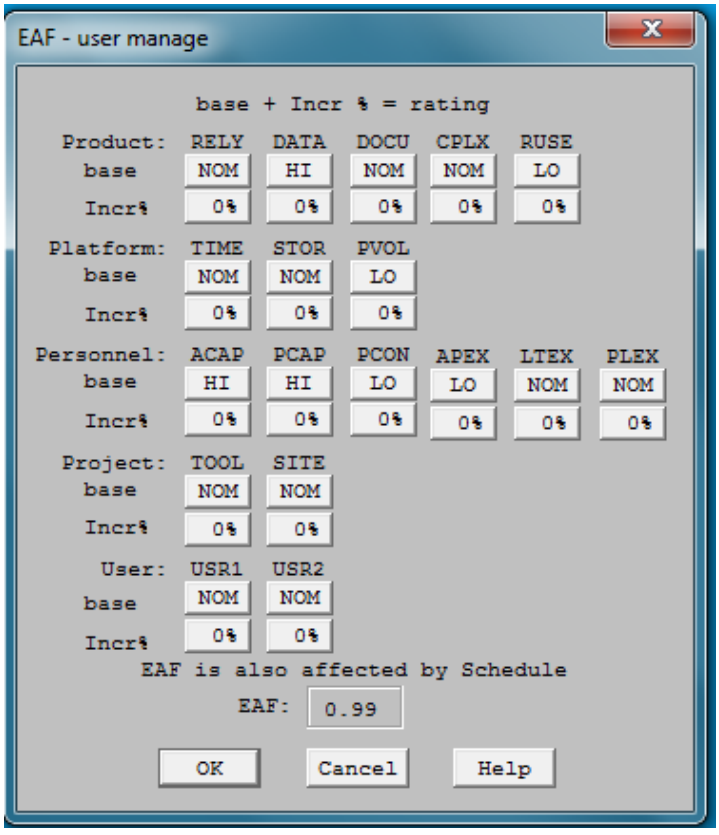


Table 16: COCOMOII Cost Driver – product management

Cost Driver	Value	Rationale
RELY	High	Project management is the most important module in our system, if the system crashed then the system user can't do any purchase or product management that online shopper can't buy products online which will cause financial losses.
DATA	Very High	In this module, the system provides some storage spaces to manage the product's information including their pictures and videos, we estimate that we will write 2,200 lines of code and give every providers 5GB for multimedia, then the result of D/P would be very large.
DOCU	Nominal	All the documents in our project should exactly match to life-cycle needed since there doesn't have stringent requirement for micro-level documentation, but must be adequate enough for further maintenance.
CPLX	Low	The product management module would provide users to upload their products' picture files and data, also users can do some simply edit to their product page in this module.
RUSE	Very Low	This is a customized module so this can only fit on our system, but not for any other project or program.
TIME	Nominal	In our project, all the modules consume little computations and resources.
STOR	High	Since system provides users to upload multimedia data of their products online so the storage of this module might be much bigger than other modules so we give some more constraint on available storage.
PVOL	Low	In our system, the platforms are stable and are not required update or upgrade frequently.
ACAP	High	Five of six team members have certain extent experience in analysis but not maturity.
PCAP	High	Five of six team members have experience in the programming language that we are going to use in our project.
PCON	Low	Three of six team members may not plan to take CSCI577b.
APEX	Low	There's only one team member has little experience in developing software system, and others just learned from lectures.
LTEX	Nominal	Five of six team members have some experiences in the writing JAVA; each member has about 2 years experiences in average. However, there still one beginner in the development team.
PLEX	Nominal	Every team member has little knowledge of understanding how to make the platform used in our system more powerful.
TOOL	Nominal	We don't use strong, mature integrated software tools in our system; the only tool we use is very basic and moderately integrated software tool.
SITE	Nominal	All team members are in different cities and companies that the team can only hold meeting online.

Figure 9: COCOMO II EAF – product management

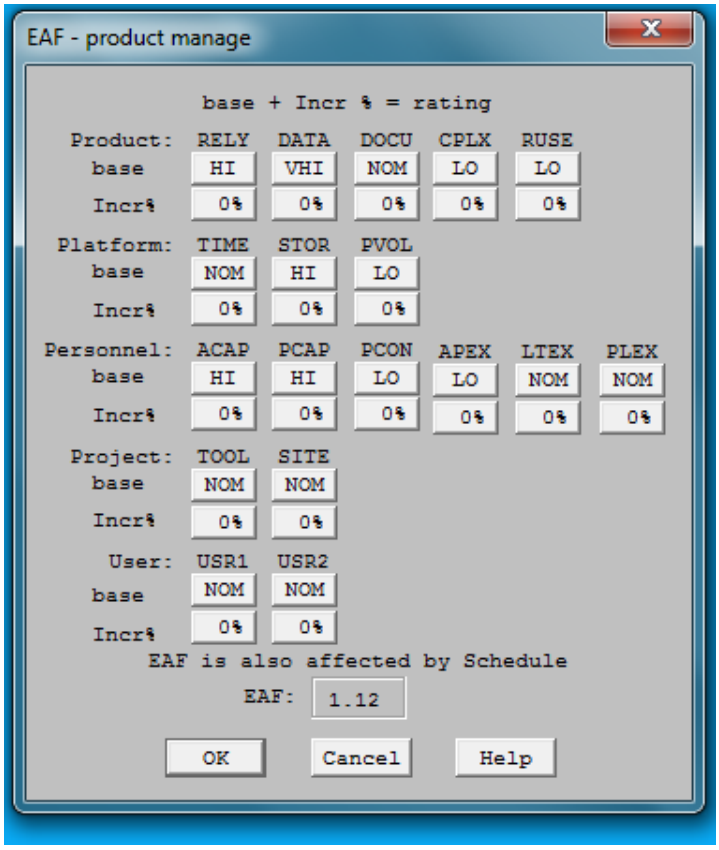


Figure 10: COCOMO II of Flowerseeker

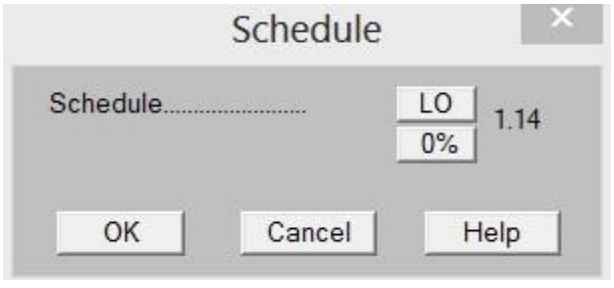
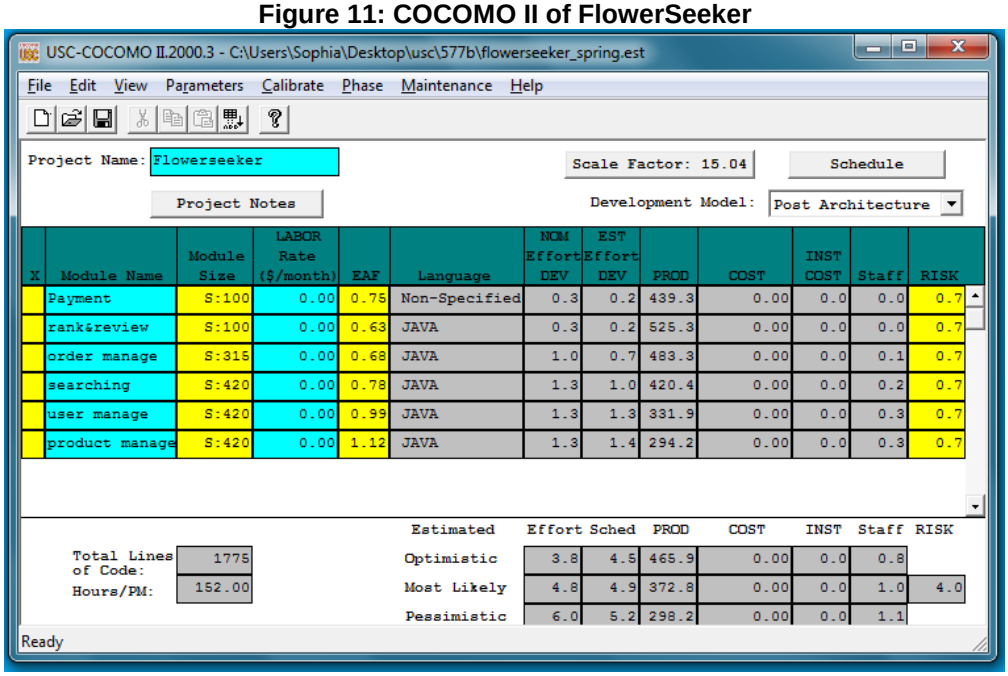


Figure 11: COCOMO II of FlowerSeeker



6. Iteration Plan

6.1 Plan

We plan three iterations to develop our system based on our capability goals and modules. First iteration focus on develop the most important capabilities in our system: searching (searching module), upload pictures (product module) and subscription (user module). In second iteration, we develop rank & review (rank & review module) and order (order module) capabilities. And we plan to develop coupon, upload video and recommendation function in the third iteration, since these three functions are in second priority. According to course schedule, our milestone set on Feb. 6 (before RDCP ARB) and Apr. 10 (before TRR ARB).
Iteration 1: 02/16/13 – 03/02/13
Iteration 2: 03/03/13 – 04/06/13
Iteration 3: 04/07/13 – 04/19/13

6.1.1 Capabilities to be implemented

Table 17: Construction iteration capabilities to be implemented

ID	Capability	Description	Priority	Iteration
OC-1	Search functionality	The system is capable of searching product by location, occasion, ranking, etc.	1 (Must have)	1

OC-2	Upload pictures	The system is capable of uploading pictures for product by florist.	1 (Must have)	1
OC-3	Ranking & Review	The system is capable of creating and updating rank and review to customer by florist and to product and florist by customer.	1 (Must have)	1
OC-4	Order Management	The system is capable of showing order history and status for florists to see how many customers purchased flowers from this florist. And also for online shoppers to check the order history to track previous orders they placed.	1 (Must have)	1
OC-5	Subscription	The system is capable of making subscription and pay monthly fee by premium user.	1 (Must have)	2
OC-6	Coupon Generation	The system is capable of generating coupons for florists to promote their products to specific customers.	2 (Could have)	2
OC-7	Upload Video	The system is capable of uploading videos for product by florist.	2 (Could have)	3
OC-8	Recommendation Engine	The system is capable to recommending customers	2 (Could have)	3

6.1.2 Capabilities to be tested

Table 18: Construction iteration capabilities to be tested

ID	Capability	Description	Priority	Iteration
OC-1	Search functionality	The system is capable of searching product by location, occasion, ranking, etc.	1 (Must have)	1
OC-2	Upload pictures	The system is capable of uploading pictures for product by florist.	1 (Must have)	1
OC-3	Ranking & Review	The system is capable of creating and updating rank and review to customer by florist and to product and florist by customer.	1 (Must have)	1
OC-4	Order Management	The system is capable of showing order history and status for florists to see how many customers purchased flowers	1 (Must have)	1

		from this florist. And also for online shoppers to check the order history to track previous orders they placed.		
OC-5	Subscription	The system is capable of making subscription and pay monthly fee by premium user.	1 (Must have)	2
OC-6	Coupon Generation	The system is capable of generating coupons for florists to promote their products to specific customers.	2 (Could have)	2
OC-7	Upload Video	The system is capable of uploading videos for product by florist.	2 (Could have)	3
OC-8	Recommendation Engine	The system is capable to recommending customers	2 (Could have)	3

6.1.3 Capabilities not to be tested

All capabilities will be tested after each iteration.

6.1.4 CCD Preparation Plans

There will have one client and two development team members participate in CCD presentation. Development team will provide a brief instruction for client to practice system; and also create a feedback form for client to fill in to see if there have any other parts that development team can improve or not
Also, the team members will provide a user manual on the capabilities to be presented, more specifically on the administrative, customer and florist system role.
Team will provide two laptops computers fully equipped to run FlowerSeeker demo.

6.2 Iteration Assessment

6.2.1 Capabilities Implemented, Tested, and Results

Table 19: Capabilities implemented, tested, and results

ID	Capability	Test Case	Test Results	If fail, why?
1	Existing user can successfully login	TC-01-01 Login	Pass	
2	Error message show up if type wrong username or password	TC-01-02 Incorrect	Pass	

		Login		
3	User can successfully log out to home page	TC-01-03 Logout	Pass	
4	Right product in searched zip code displayed	TC-02-01 Search by location	Pass	
5	Product in selected price range displayed	TC-02-02 Search by price	Pass	
6	Product in selected occasion displayed	TC-02-03 Search by occasion	Pass	
7	Product in selected rating displayed	TC-02-04 Search by rating	Pass	
8	User can successfully register as a new florist	TC-03-01 Register new florist	Pass	
9	Error message show up when if some field doesn't be filled in or username has already been used	TC-03-02 Register florist failure	Pass	
10	Florist can successfully add new product to product list	TC-04-01 Add new product	Pass	
11	Error message show up if there's some missing information doesn't fill in	TC-04-02 Add invalid product	Pass	
12	Customer list correctly displayed	TC-05-01 Show customer list	Pass	
13	Customer detail displayed when click on specific customer page	TC-05-02 Show customer detail	Pass	
14	System can generate coupon for customer	TC-05-03 Generate coupon	N/A	This function will be generated in next iteration
15	System can show placed orders	TC-07-01 Florist Order History	Pass	
16	Order detail page displayed when chosen	TC-07-02 Florist Order Detail	Pass	
17	The updated order status can be displayed	TC-07-03 Update	Pass	

		Order Status		
18	User can rank specific product	TC-09-01 Rank product	Pass	
19	User can review all products	TC-09-02 Review product	Pass	
20	Customer's order history can be displayed correctly	TC-10-01 Customer Order History	Pass	
21	Order detail page can be displayed	TC-10-02 Customer Order Detail	Pass	
22	All the premium subscribers are shown in system correctly	TC-11-01 Premium Subscribers info	Pass	
23	User can successfully register as a new customer	TC-12-01 Register new customer	Pass	
24	Error message show up when if some field doesn't be filled in or username has already been used	TC-12-02 Register customer failure	Pass	

6.3 Adherence to Plan

Team followed iteration plan and remained faithful for almost all proposed activities, we were able for finish almost all proposed capabilities except Recommendation engine capability. Despite the delay on it here are some positive aspects of the construction iteration:

- The order on the development of the capabilities remained faithful. By doing this, we were able to present continues prototype feedback to the client.
- All Team members worked on their assigned tasks by the role given. By doing this, it was easy to share domain knowledge by asking the person who created or tested a specific part module of the system.

Here are some failures found in the past iteration:

- Testing activities started one week late compared to the proposed date
- Client delayed the creation of Amazon E2C account. This situation restrained the earlier testing and upload of the system in the final context environment.
- Checkout process wasn't fully developed. Even though the coding checkout module on a sandbox paypal coding account was finish on time, it didn't go fully operational because client has not created a PayPal account neither defined the fees and rates she's going to use for the flowers sales.