

# Life Cycle Plan (LCP)

# Frenzy

## Team 01

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12/5/16

# Version History

Date	Author	Version	Changes made	Rationale
10/10/16	Jheel Somaiya	1.0	Added Introduction and diagrams	Initial draft for the LCP package.
10/17/16	Jheel Somaiya	1.1	Added Future milestones, Coincomo	FCR LCP package.
12/5/16	Jheel Somaiya	1.2	Changed Incorrect Phase Dates Modified Development Phase Artifacts Added member responsibilities in Development Phase Added Estimation Conclusion and Priorities in Iteration Plan	Final LCP Package

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## Life Cycle Plan (LCP)

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# 1. Introduction

## 1.1 Purpose of the LCP

The purpose of a development project's LCP is to:

- Serve as a basis for monitoring and controlling the project's progress
- Help make the best use of people and resources throughout the system's life cycle
- Provide evidence to other key stakeholders that the developers have thought through the major life cycle issues in advance

## 1.2 Status of the LCP

The status of the LCP is currently at the Foundation Commitment Package version number 1.1 where got feedback from the client, and updated the document accordingly from the draft version.

## 1.3 Assumptions

- The duration of the project is 13 weeks.

## 2. Milestones and Products

### 2.1 Overall Strategy

Using [Scrum Board](#) to keep the track of the future work and current work done.

The Frenzy web app is following Architected Agile process because theory says that this is the best way to develop the software, compared to other methods such as RUP. The reasons behind this is that the AA process builds on the strengths of current process models: early verification and validation concepts in the V-model, concurrency concepts in the Concurrent Engineering model, lighter-weight concepts in the Agile and Lean models, risk-driven concepts in the spiral model, the phases and anchor points in the RUP and recent extensions to address SoS acquisition. In comparison to the software-intensive RUP, the AA also addresses hardware and human factors integration.

#### Exploration phase

**Duration:** 08/22/16-09/11/16

**Concept:** Identify operational concept, system and software requirements and architecture, and life-cycle plan.

**Deliverables:** Client Interaction Report

**Milestone:** N/A

**Strategy:** One Incremental Commitment Cycle, Risk assessment analysis, Win-Win Negotiation Sessions.

#### Valuation phase

**Duration:** 9/16/16-10/10/16

**Concept:** Identify Objectives, Constraints and Priorities, develop operation concept, explore alternatives, provide project feasibility evidence, Prototyping, Assess and plans to mitigate risks, Plan and manage project, perform win-win negotiation, Define quality and configuration policy.

**Deliverables:** Draft Foundations Commitment Package

**Milestone:** Foundations Commitment Review

**Strategy:** One Incremental Commitment Cycle, Risk assessment analysis, Win-Win Negotiation Sessions, Planning Poker.

#### Development phase

**Duration:** 10/10/16-12/02/16

**Concept:** Develop the UI Design for shop-widget, Implement the Shop-Similar functionality, Improve the clothing tag UI.

**Deliverables:** Process Flow Diagrams, Code Igniter Framework interacting with Frenzy DB.

**Milestone:** Client and Development Team Review

**Strategy:** Agile-Scrum.

## 2.2 Project Deliverables

### 2.2.1 Exploration Phase

**Table 1: Artifacts Deliverables in Exploration Phase**

Artifact	Due date	Format	Medium
Jira	Every Monday	website	Jira
Progress Report	Biweekly	.xls	Soft copy
Project Plan	Biweekly	.mpp	Soft copy
Client Interaction Report	09/16/2016	.doc, .pdf	Soft copy
Win Conditions Report (AA)	09/26/2016	.doc, .pdf	Soft copy

### 2.2.2 Valuation Phase

**Table 2: Artifact deliverable in Valuation Phase**

Artifact	Due date	Format	Medium
Jira	Every Monday	website	Jira
Progress Report	Biweekly	.xls	Soft copy
Project Plan	Biweekly	.mpp	Soft copy
Team Prototype Presentation Slides	09/30/2016	.pdf	Soft copy
Foundations Commitment Presentation	10/10/2016	.pdf	Soft copy
Foundations Commitment Package	10/17/2016	.doc, .pdf	Soft copy

### 2.2.3 Development Phase

**Table 3: Artifact deliverable in Development Phase**

Artifact	Due date	Format	Medium
Scrum Board Update	Biweekly	.xls	Soft Copy
Local Environment Setup	10/20/2016	.php	Code
Develop Shop Similar module with Sorting features and integrated it into shop widget	11/15/2016	.sql, .php	Code
Complete of the Development of the Shop Widget	11/20/2016	.html, .css	Code
Build the Clothing Tags into the Shop popup	11/30/2016	.html, .css	Code



## 3. Responsibilities

### 3.1 Project-specific stakeholder's responsibilities

The owner of the project is Rigo Garcia and we have eight project team members.

**Table 4: Stakeholder's Responsibilities in each phase**

Team Member / Role	Exploration	Valuation	Development
<b>Jheel Somaiya</b>  Project Manager, Life-cycle planner	<b>Primary Responsibility</b> Create and follow up action items. Record project progress.  <b>Secondary Responsibility</b> Detail Project Plan. Identify responsibilities and skills.	<b>Primary Responsibility</b> Create and follow up action items. Record project progress.  <b>Secondary Responsibility</b> Identify milestones ad products. Estimate project effort and schedule.	Project management
<b>Sailee Rane</b>  Feasibility Analyst,	<b>Primary Responsibility</b> Gather risks. Assess and plan to mitigate risks.	<b>Primary Responsibility</b> Provide evidence of feasibility of architecture. Analyze Business Case.	Development – Front End Development
<b>Ashwin Hariharan</b>  System Architect,	<b>Primary Responsibility</b> Evaluate system	<b>Primary Responsibility</b> Define high-level architecture. Document architecture feasibility.	Development – Back End Development
<b>Arpan Badeka</b>  Requirements Engineer, UML Modeler	<b>Primary Responsibility</b> Gather win-conditions from stakeholders. Capture win-conditions in win-win session. <b>Secondary Responsibility</b> Perform feasibility evidence for the requirements	<b>Primary Responsibility</b> Document most significant requirements. Prioritize the requirements. <b>Secondary Responsibility</b> Develop the respective UML diagrams	Development – Full Stack Developer, Tester
<b>Ankur Palav</b>  Prototyper, Developer	<b>Primary Responsibility</b> Assess Prototype and Components, Develop Prototype	<b>Primary Responsibility</b> Develop prototype. Get prototype feedback.	Development – Front End Development

<b>Rishabh Sharma</b> Operational Concept Engineer,	<b>Primary Responsibility</b> Identify shared vision.	<b>Primary Responsibility</b> Develop new operational concept.	<b>Development – Back End Development</b>
<b>Alan Kwan</b> IIV&V, Quality Focal Point	<b>Primary Responsibility</b> Verify and validate work products.  <b>Secondary Responsibility</b> remind team to use Jira	<b>Primary Responsibility</b> Verify and validate work products. Construct traceability matrix.  <b>Secondary Responsibility</b> remind team to use Jira	<b>Tester, Verification &amp; Validation</b>
<b>James</b> Owner	<b>Primary Responsibility</b>  - Convey project ideas to USC team	<b>Primary Responsibility</b>  - Win-win Negotiation	

## 3.2 Skills

**Table 5: Member Skills**

Team members	Role	Skills
Jheel Somaiya	Project Manager/Life Cycle Planner,	<b>Current Skills:</b> HTML, CSS, Java, MySQL, Management, Presentation Skill, Cost Estimation, Resources Management, MS Project, Quality Assurance  <b>Required skills :</b> Server Side scripting, App development
Sailee Rane	Feasibility Analyst,	<b>Current Skills:</b> HTML, CSS MySQL, Java, Presentation Skill  <b>Required Skills :</b> Server Side Scripting, App development
Ashwin Hariharan	Prototyper/Developer	<b>Current Skills:</b> HTML, CSS, JavaScript, Java, Android Java, App Development, MySQL, Php, Presentation Skills

		<b>Required skills :</b> Server Side Scripting,
Rishabh Sharma	Operational Concept Manager,	<b>Current Skills:</b> Java, MySQL, Databases, SQL, , <b>Required Skills :</b> HTML,CSS, App Development, Server Side Scripting
Alan Kwan	IIV & V Quality Focal Point	<b>Current Skills:</b> Software Configuration Management (Version Control Systems, Bug Tracking Systems, Build Automation) <b>Required Skills:</b> App development, PHP, HTML, CSS, Server Side Scripting
Sailee Rane	Requirements Engineer,	<b>Current Skills:</b> C++, Java, HTML, CSS, JAVASCRIPT, MySQL,.NET development <b>Required skills :</b> App Development, Server Side Scripting, Presentation Skills
Ankur Palav	Software Architecture,	<b>Current Skills:</b> Java, Python, PHP, Javascript, MySQL, CSS, PHP, Server Side Scripting <b>Required skills:</b> Presentation Skill, App Development.
Arpan Badeka	Prototyper/ Developer	<b>Current Skills:</b> HTML, CSS, JavaScript, Java, Android Java, App Development, MySQL, Php. <b>Required Skills:</b> Server Side Scripting, Presentation Skills.

## 4. Approach

### 4.1 Monitoring and Control

The project is monitored with a bi-weekly progress report and project plan. The progress report includes the top project risks, number of SLOC, COTS software and defects/concerns. Also the project team meets every Monday, Wednesday and Friday after class for team updates

#### 4.1.1 Closed Loop Feedback Control

Using google drive to review work of project team and giving input. Also having peer review meeting every couple of weeks to discuss certain issues and give feedback to each other on work.

#### 4.1.2 Reviews

- Team meetings; we have a group meeting every Monday, Wednesday and Friday after class to discuss projects updates and what we should do and what are some issues we need to mitigate
- Win-win negotiation; the negotiation helps us and the client to be on the same page and share the same understanding.
- Feedback from instructors: the comments from instructors are a great help.

### 4.2 Methods, Tools and Facilities

**Table 6: Methods and Tools**

Tools	Usage	Provider
Github	A repository version control system to store our code.	Github
Visual paradigm	A tool to create the UML diagrams used in the project	Visual paradigm
Microsoft office	MS office was used to create many of our documents and project plan	Microsoft
WhatsApp (Group/Chat)	A group on WhatsApp for communications and setting up meetings	WhatsApp
Skype	Video Chat with den students	Microsoft
Jira	A tool to create, track and identify effort used in each task	USC
COINCOMO	A tool for resource estimation	USC
Winbook	A tool to identify win conditions of all stakeholders and prioritize them	USC

## 5. Resources

Identifying the following Information in order to estimation the software cost:

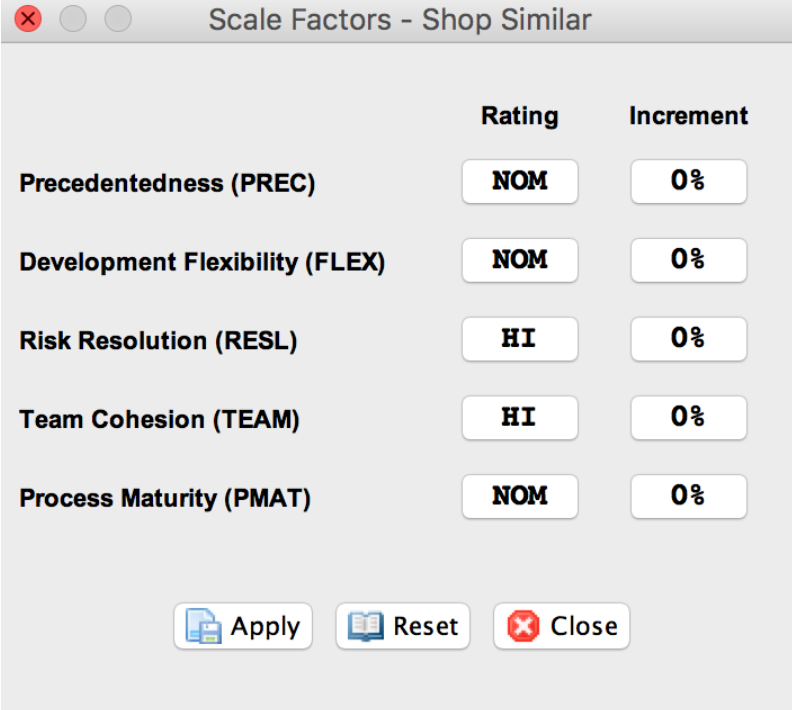
- Estimated CSCI577A Effort: 7 team members at 20 hours/week for 13 weeks
- Total Estimated Effort: 1699 Hours
- Budget Information: \$ 0
- Project Duration: 12 weeks
- Components in the development project: Shop Similar Module – Lower Prices, Same Brand, Similar Items Systems
- Tech Stack: PHP, Code Igniter Framework, MYSQL, AngularJS, HTML, CSS

**Table 7: COCOMOII Scale Driver**

Scale Driver	Value	Rationale
Precedentedness (PREC)	NOM	Considerable understanding of the project objectives and team members have a moderate level of experience in web technologies.
Development Flexibility (FLEX)	NOM	The redesigning of the website requires full conformance with requirements and the established specifications.
Risk Resolutions (RESL)	High	Elimination of the risks can be done by building the prototypes for showcasing different functionalities.
Team Cohesion (TEAM)	High	High Co-operation between the team members. Active participation and greater understanding of the project.
Process Maturity (PMAT)	NOM	Achieving key area goals of CMM Maturity to a reasonable degree of satisfaction

**Table 8: Values of COINCOMO Cost Drivers - All modules**

Cost Driver	Similar Items	Lower Prices	Same Brand	Shop Widget Design	Clothing Tag
RELY	LOW	NOMINAL	LOW	HIGH	HIGH
DATA	NOMINAL	HIGH	NOMINAL	LOW	LOW
DOCU	NOMINAL	NOMINAL	NOMINAL	NOMINAL	NOMINAL
CPLX	NOMINAL	NOMINAL	NOMINAL	LOW	LOW
RUSE	NOMINAL	NOMINAL	LOW	HIGH	NOMINAL
TIME	NOMINAL	HIGH	HIGH	HIGH	HIGH
STOR	NOMINAL	HIGH	HIGH	NOMINAL	NOMINAL
PVOL	LOW	LOW	LOW	LOW	LOW
ACAP	NOMINAL	NOMINAL	NOMINAL	NOMINAL	NOMINAL
PCAP	HIGH	NOMINAL	NOMINAL	NOMINAL	HIGH
PCON	HIGH	HIGH	HIGH	HIGH	HIGH
APEX	NOMINAL	NOMINAL	NOMINAL	NOMINAL	NOMINAL
LTEX	HIGH	HIGH	HIGH	HIGH	HIGH
PLEX	NOMINAL	NOMINAL	NOMINAL	NOMINAL	HIGH
TOOL	NOMINAL	NOMINAL	NOMINAL	NOMINAL	NOMINAL
SITE	HIGH	HIGH	HIGH	HIGH	HIGH



**Scale Factors - Shop Similar**

	Rating	Increment
<b>Precedentedness (PREC)</b>	<b>NOM</b>	<b>0%</b>
<b>Development Flexibility (FLEX)</b>	<b>NOM</b>	<b>0%</b>
<b>Risk Resolution (RESL)</b>	<b>HI</b>	<b>0%</b>
<b>Team Cohesion (TEAM)</b>	<b>HI</b>	<b>0%</b>
<b>Process Maturity (PMAT)</b>	<b>NOM</b>	<b>0%</b>




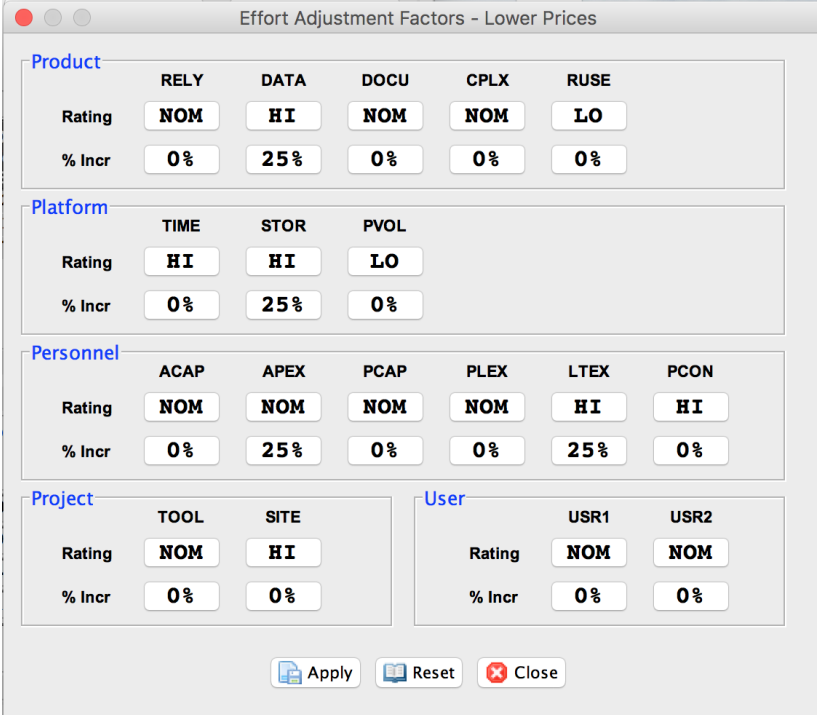




Figure 1: Scale Factor



**Effort Adjustment Factors - Lower Prices**

**Product**

	RELY	DATA	DOCU	CPLX	RUSE
Rating	<b>NOM</b>	<b>HI</b>	<b>NOM</b>	<b>NOM</b>	<b>LO</b>
% Incr	<b>0%</b>	<b>25%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>

**Platform**

	TIME	STOR	PVOL
Rating	<b>HI</b>	<b>HI</b>	<b>LO</b>
% Incr	<b>0%</b>	<b>25%</b>	<b>0%</b>

**Personnel**

	ACAP	APEX	PCAP	PLEX	LTEX	PCON
Rating	<b>NOM</b>	<b>NOM</b>	<b>NOM</b>	<b>NOM</b>	<b>HI</b>	<b>HI</b>
% Incr	<b>0%</b>	<b>25%</b>	<b>0%</b>	<b>0%</b>	<b>25%</b>	<b>0%</b>

**Project**

	TOOL	SITE
Rating	<b>NOM</b>	<b>HI</b>
% Incr	<b>0%</b>	<b>0%</b>

**User**

	USR1	USR2
Rating	<b>NOM</b>	<b>NOM</b>
% Incr	<b>0%</b>	<b>0%</b>

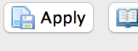

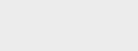




Figure 2: EAF-Lower Price

Effort Adjustment Factors - Same Brand

**Product**

	RELY	DATA	DOCU	CPLX	RUSE
Rating	LO	NOM	NOM	NOM	LO
% Incr	0%	25%	0%	0%	0%

**Platform**

	TIME	STOR	PVOL
Rating	HI	HI	LO
% Incr	0%	25%	0%

**Personnel**

	ACAP	APEX	PCAP	PLEX	LTEX	PCON
Rating	NOM	NOM	NOM	NOM	HI	HI
% Incr	0%	25%	0%	0%	25%	0%

**Project**

	TOOL	SITE
Rating	NOM	HI
% Incr	0%	0%

**User**

	USR1	USR2
Rating	NOM	NOM
% Incr	0%	0%

Apply Reset Close

Figure 3: EAF-Same Brands

Effort Adjustment Factors - Shop Widget Design

**Product**

	RELY	DATA	DOCU	CPLX	RUSE
Rating	HI	LO	NOM	LO	HI
% Incr	0%	0%	0%	0%	0%

**Platform**

	TIME	STOR	PVOL
Rating	VHI	NOM	LO
% Incr	0%	0%	0%

**Personnel**

	ACAP	APEX	PCAP	PLEX	LTEX	PCON
Rating	NOM	NOM	NOM	NOM	HI	HI
% Incr	0%	0%	0%	0%	25%	0%

**Project**

	TOOL	SITE
Rating	NOM	HI
% Incr	0%	0%

**User**

	USR1	USR2
Rating	NOM	NOM
% Incr	0%	0%

Apply Reset Close

Figure 4: EAF-Shop Widget Design



Effort Adjustment Factors - Clothing Tag

Product					
	RELY	DATA	DOCU	CPLX	RUSE
Rating	HI	LO	NOM	LO	NOM
% Incr	0%	0%	0%	0%	0%

Platform			
	TIME	STOR	PVOL
Rating	HI	NOM	LO
% Incr	0%	0%	0%

Personnel						
	ACAP	APEX	PCAP	PLEX	LTEX	PCON
Rating	NOM	NOM	NOM	HI	HI	HI
% Incr	0%	0%	0%	0%	25%	0%

Project		User		
	TOOL	SITE	USR1	USR2
Rating	NOM	HI	NOM	NOM
% Incr	0%	0%	0%	0%

Apply Reset Close

Figure 5: EAF-Clothing Tag

Effort Adjustment Factors - Similar Items

Product					
	RELY	DATA	DOCU	CPLX	RUSE
Rating	LO	NOM	NOM	NOM	NOM
% Incr	0%	0%	0%	0%	0%

Platform			
	TIME	STOR	PVOL
Rating	NOM	NOM	LO
% Incr	0%	0%	0%

Personnel						
	ACAP	APEX	PCAP	PLEX	LTEX	PCON
Rating	NOM	NOM	HI	NOM	HI	HI
% Incr	0%	0%	0%	0%	25%	25%

Project		User		
	TOOL	SITE	USR1	USR2
Rating	NOM	HI	NOM	NOM
% Incr	0%	0%	0%	0%

Apply Reset Close

Figure 6: EAF-Similar Items

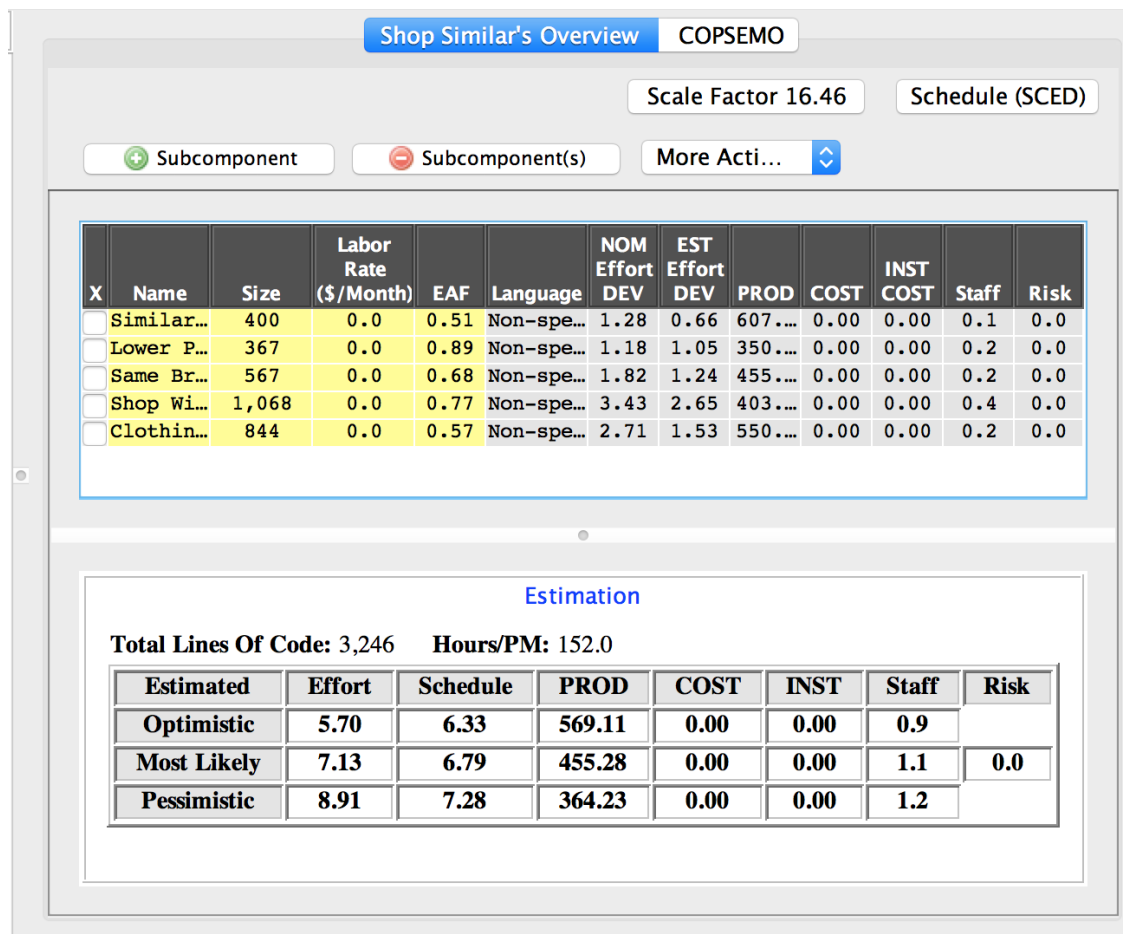
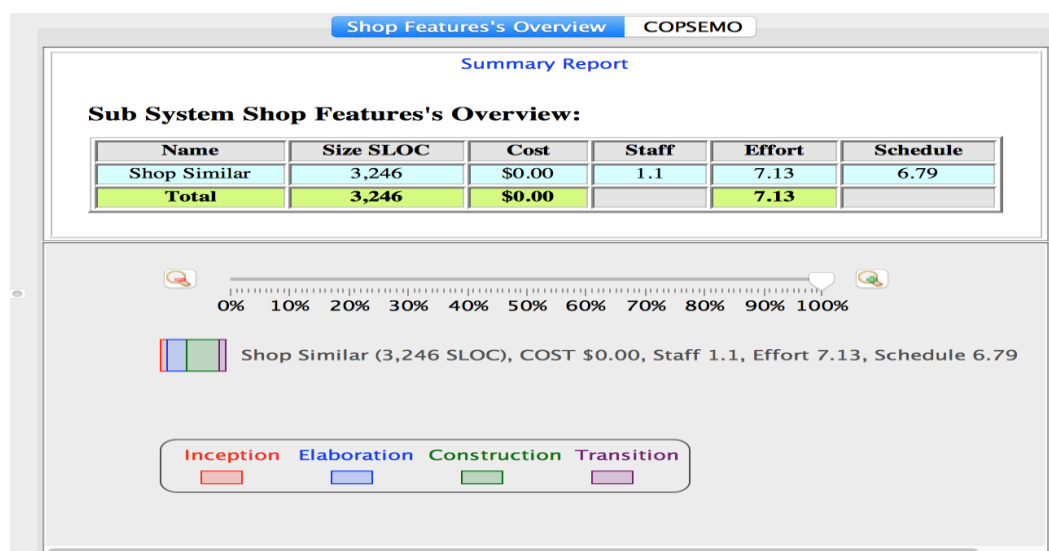


Figure 7: CoinComo Estimate Results



**Figure 8: CoinComo Summary**

The conclusion from the COINCOMO estimation is that the effort and schedule values specified above was a reasonably accurate estimate of hours and effort needed to deliver the required modules of our project as we could finish the modules within the desired timeframe

## Iteration Plan

### 6.1 Plan

The construction iteration of the Development phase consists of the following user stories:

#### 6.1.1 Construction Iteration: Capabilities to be Developed & Tested

**Table 9: Construction iteration capabilities to be implemented & tested**

To Be Developed	Developer	Tester	Priority Level
<b>OC-1 Sort Items:</b> User can sort products based on prices, new arrival, most popular	Ankur Palav	Alan Kwan	Must Have
<b>OC-2 Shop Widget:</b> User can view the product in a slide view fashion and overall better UI	Ashwin Hariharan	Alan Kwan	Must Have
<b>OC-3 Shop similar:</b> User can search similar items based on price, color, category and brand	Ankur, Rishabh	Alan Kwan	Must Have
<b>OC-4 Clothing Tag:</b> User can get the product details on mouse hover in shop widget	Ashwin Hariharan	Alan Kwan	Must Have