



WeCalEvent

Project Reporting Document

Software Engineering 2

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L^AT_EX

Contents

1	Function Points	3
1.1	Comparison with actual	4
1.2	Result analyse	4
2	COCOMO II analyse	4
2.1	COCOMO formula	4
2.2	Result analyse	5

1 Function Points

Function types	Weight		
	Simple	Medium	Complex
N.Inputs	3	4	6
N.Outputs	4	5	7
N.Inquiry	3	4	6
N.ILF	7	10	15
N.EIF	5	7	10

Internal Logical File

- Users
- Events
- Notifications

There are three entities with simple structure.

Thus we adopt a simple weight for all of them : $3 * 7 = 21$ FPs.

External Interface File

- Weather

This is a medium weight entity: $1 * 7 = 7$ FPs.

External Input

- Login/Logout
- Create/Update user
- Create/Update/Delete event
- Import Calendar

Login/Logout is a simple structure entity.

For three other entities we adopt medium weight: $1 * 3 + 3 * 4 = 15$ FPs.

External Output

- Calendar
- Export Calendar

Weight for Calendar is 7, for Export Calendar is 5: $1 * 7 + 1 * 5 = 12$ FPs.

External Inquiry

- Search users
- View event
- View profile

Search users and View profile are easy tasks, while View event is medium hard: $2 * 3 + 1 * 4 = 10$ FPs.

Thus, in total we have $21 + 7 + 15 + 12 + 10 = 65$ FPs \rightarrow unadjusted function points.

1.1 Comparison with actual

Using JEE as programming language unadjusted SLOC = $65 * 46 = 2990$ SLOC
Our project actual SLOC obtained with CLOC tool including test :
Java: 2772 SLOC
JSF: 731 SLOC
Total: 3503 SLOC

1.2 Result analyse

Regarding to FP analyse, our actual size of project is approximately equal to Functional Point results with an error rate of $(3503-2990)/2990 = 17\%$.

2 COCOMO II analyse

We will get the required effort by COCOMO II, by using our actual source line of code.

2.1 COCOMO formula

$$\text{Effort} = 2.94 * (KSLOC)^E * EAF$$


EAF : The effort Adjustment Factor derived from the Cost Drivers.

E : Is an exponent derived from five Scale Drivers

KSLOC : 3,503

Result:

These results are obtained with the following link: <http://csse.usc.edu/tools/COCOMOII.php>



COCOMO II - Constructive Cost Model

Model(s)
 COCOMO
 Monte Carlo Risk: Off
 Auto Calculate: Off

Software Size Sizing Method Source Lines of Code

[SLOC](#) % Design Modified % Code Modified % Integration Required Assessment and Assimilation Required (0% - 8%) Software Understanding (0% - 50%) Unfamiliarity (0-1)

New: 3503

Reused: 0 0 0 0 0 0 0

Modified: 0 0 0 0 0 0 0

Software Scale Drivers

Precedentedness: Very Low Architecture / Risk Resolution: Nominal Process Maturity: Low

Development Flexibility: Nominal Team Cohesion: High

Software Cost Drivers

Product	Required Software Reliability: High	Personnel	Analyst Capability: Nominal	Platform	Time Constraint: High
	Data Base Size: Low		Programmer Capability: Nominal		Storage Constraint: Nominal
	Product Complexity: Nominal		Personnel Continuity: Very Low		Platform Volatility: Nominal
	Developed for Reusability: Low		Application Experience: Nominal	Project	Use of Software Tools: Nominal
	Documentation Match to Lifecycle Needs: High		Platform Experience: Low		Multisite Development: Very Low
			Language and Toolset Experience: Low		Required Development Schedule: Nominal

Maintenance: Off

Software Labor Rates
 Cost per Person-Month (Dollars):

Results

Results

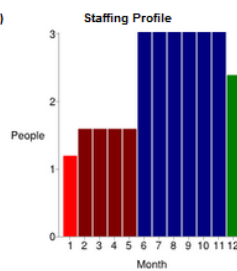
Software Development (Elaboration and Construction)

Effort = 27.1 Person-months
 Schedule = 10.9 Months
 Cost = \$0

Total Equivalent Size = 3503 SLOC

Acquisition Phase Distribution

Phase	Effort (Person-months)	Schedule (Months)	Average Staff	Cost (Dollars)
Inception	1.6	1.4	1.2	\$0
Elaboration	6.5	4.1	1.6	\$0
Construction	20.6	6.8	3.0	\$0
Transition	3.2	1.4	2.4	\$0



Software Effort Distribution for RUP/MBASE (Person-Months)

Phase/Activity	Inception	Elaboration	Construction	Transition
Management	0.2	0.8	2.1	0.5
Environment/CM	0.2	0.5	1.0	0.2
Requirements	0.6	1.2	1.6	0.1
Design	0.3	2.3	3.3	0.1
Implementation	0.1	0.8	7.0	0.6
Assessment	0.1	0.6	4.9	0.8
Deployment	0.0	0.2	0.6	1.0

Your output file is http://cse.usc.edu/tools/data/COCOMO_February_10_2015_11_12_04_440717.txt

Created by Ray Madachy at the Naval Postgraduate School. For more information contact him at rjmadach@nps.edu

2.2 Result analyse

Number of people = Effort/Duration = $27.1/10.9 = 2.48 = 3$ people.

To fulfill the effort required for this project 3 people are required, which matches with our number of team members.