

Cost Estimation: Travel Diaries Software Engineering Project

Team 5

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Cost estimation of our project i.e. Travel Diaries, has been done considering the COCOMO(Constructive Cost Estimation Model) model.

According to the above mentioned model, the **effort required**(E) for completing a component is given by the formula:

$$E = a \times (X^b)$$

where a , and b are constants based on the layers of software development projects namely *Organic*, *Semi-Detached*, and *Embedded*.

X is the size of the project expressed in terms of KDLOC(Kilo Delivered Lines of Code).

Software Project	a	b
Organic	2.4	1.05
Semi-Detached	3.0	1.12
Embedded	3.6	1.20

Our project is of Semi-Detached(the team consists of a mixture of experienced and inexperienced members) type and hence the values for a and b are 3.0and 1.12.

Total Functional Points ≈ 90

Corresponding Lines of Code per FP ≈ 80

Total Lines of Code ≈ 7200

Putting the values in the formula

$$\begin{aligned} E &= 3 \times 7.2^{1.12} \\ &= 27.37 \end{aligned}$$

Hence we require 27.37 Person Months to complete this project.

Team size = 9

Therefore we require ≈ 3 months to complete this project.

Software Effort Distribution

Phase/Activity	Inception	Elaboration	Construction	Transition
Management	0.3	0.5	.8	0.8
Environment	0.2	0.6	.9	0.6
Requirements	0.4	0.7	1.3	0.7
Design	0.4	1.0	3.2	1.2
Implementation	0.6	1.1	4.17	1.1
Assessment	0.2	0.7	1.0	1.4
Deployment	0.2	0.6	1.4	1.3

Acquisition Phase Distribution

Phase	Effort(PM)	Schedule(PM)	Members
Inception	2.3	5-7 Days	4-5
Elaboration	5.2	15-17 Days	5-7
Construction	12.77	40-45 Days	7-8
Transition	7.1	20-25 Days	6-7

END