

Cost Estimation Bims' Kitchen

Team 3

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Cost estimation of our Software Project which is an android application and a website for Bims' Kitchen(a night kitchen) is based on COCOMO Model. An android application will mainly consist of JAVA code and XML code. The website will contain HTML, CSS, javascript and Bootstrap. COCOMO Model is based on regression analysis. According to COCOMO, the effort required for completing the project is given by the formula:

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

E = effort

a, and **b** = constants

KLOC = Kilo lines of code

E is the area under the curve in the person month graph

By using **E** we can calculate Development Time(D.T.) using the formula:

$$DT = x \times (E)^y [month]$$

x and **y** are constants

Values of **a**, **b**, **x** and **y** are corresponding to different categories i.e. Organic Semi-detached and Embedded and are given on the basis of previous projects and team experience.

Software Project	<i>a</i>	<i>b</i>	<i>x</i>	<i>y</i>
Organic	2.4	1.05	2.5	0.38
Semi-Detached	3.0	1.12	2.5	0.35
Embedded	3.6	1.20	2.5	0.32

Our team is a combination of people with medium experience in working in different projects. Therefore our project comes under the Semi-Detached category and hence the values for a and b are **3.0** and **1.12**.

In the application

Total Activity pages ≈ 40

Average Lines of Code per activity page ≈ 130

Total Lines of Code ≈ 5200

Putting the values in the formula:

$$\begin{aligned}
 E &= 3 \times 5.2^{1.12} \\
 &= 19.01
 \end{aligned}$$

Hence we require **19.01** Person Months to complete this project.

Team size = 8

Therefore we require approximately 2 and a half months to complete this project.

Written By: Mayank Maurya
Reviewed By: Mayank Sharma