ONLINE FOOD DELIVERY

PRACTICAL – 05

Group Information

1.Mutthuluri Varun Kumar-2203031240878
2.Teeparthi kasiviswanadh-2203031241289
3.Narra Adarsh Reddy   -2203031240923
4.M Amrutha Lahari   -2203031240740

AIM : Do cost and effort estimation using different software cost estimation models.

COCOMO MODEL EXPLANATION :

COCOMO stands for the constructive cost model, a cost estimation model for software projects based on LOC. The number of lines of code. The COCOMO model calculates a proposed software project's time, effort, cost, and quality. In simple words, it predicts the performance of a software project.

COCOMO (Constructive Cost Estimation Model) was proposed by Boehm According to Boehm, software cost estimation should be done through three stages:

 • Basic COCOMO

 • Intermediate COCOMO

 • Complete COCOMO

BASIC COCOMO MODEL : we select basic cocomo model for our project.

The basic COCOMO model gives an approximate estimate of the project parameters.

FORMULAS :

EFFORT = a1*(kloc)a^2 PM

TDev = b1*(effort)b^2 MONTHS.

The effort estimation is expressed in units of person-months (PM)

It is the area under the person-month plot.

KLOC is the estimated size of the software product expressed in Kilo Lines of Code

• a1 , a2 , b1 , b2 are constants for each category of software products

• Tdev is the estimated time to develop the software, expressed in months

• Effort is the total effort required to develop the software product, expressed in person months (PMs).

FUNCTIONAL POINT :

The function point (FP) metric can be used effectively as a means for measuring the functionality delivered by a system •

Using historical data, the FP metric can be used to

Estimate the cost or effort required to design, code, and test the software

Predict the number of errors that will be encountered during testing

Forecast the number of components and/or the number of projected source lines in the implemented system.

Information domain values (components) are defined in the following manner .

•Number of external inputs (EIs) .

•Number of external outputs (EOs).

•Number of external inquiries (EQs).

•Number of internal logical files (ILFs).

•Number of external interface files (EIFs)

FORMULA :

FP = Count Total * [0.65 + 0.01 * ∑(Fi)]

Count Total is the sum of all FP entries Fi (i=1 to 14) are complexity value adjustment factors (VAF).

CALUCULATION :

USING ADJUSTMENT FACTORS AND ASSUMED VALUES ARE :

F09. Complex internal processing = 3

F10. Code to be reusable = 2

F13. Multiple sites = 3

F03. High performance = 4

F02. Distributed processing = 5

Project Adjustment Factor (VAF) = 17

FP = Count Total * [0.65 + 0.01 * $\sum$(Fi)]

FP = [50]* [0.65 + 0.01 * 17]

FP = [50]* [0.65 + 0.17]

FP = [50]* [0.82] = 41

FP = 41.

SOFTWARE DEVELOPMENT PROJECT CLASSIFICATION :

It is classified into 3 types

1.organic   (Application programs)

2.semidetached   (Utility programs)

3.embedded   (System programs)

Our project is fall in organic catogery , so we choose organic catogery.

Organic :

A development project can be considered of organic type, if the project deals with developing a well understood application program, the size of the development team is reasonably small, and the team members are experienced in developing similar types of projects.   Eg : data processing programs.

Project	A1	A2	B1	B2
Organic	2.4 .	1.05	2.5	0.38
Semidetached	3.0	1.12	2.5	0.35
Embedded	3.6	1.20	2.5	0.32

Calculation :

EFFORT = a1*(kloc)a^2 PM

Lets assume my project size is 400 kilo lines of code.

Effort = 2.4X(400)1.05

Effort = 2.4 X 490.65

Effort = 1177 Person-Months.

TDev = b1*(effort)b^2 MONTHS.

TDev = 2.5X(1177)^0.38

TDev = 2.5X53.93

TDev = 134 Months

COST OF THE PROJECT:

Assuming the salary of the developer is Rs.10000/- then the cost of the project is 1,340,000/-