COCOMO MODEL: Constructive Cost Estimation Model

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PREPARED FOR

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COCOMO MODEL: Constructive Cost Estimation Model

- The full name of COCOMO Model is (Constructive Cost Estimation Model), which is known as COCOMO Model.
- This model was proposed by Boehm in 1981.
- This model is used to do the most software estimation in the whole world.
- Based on the size of the software (project) through this model,
- It helps in predicting the success and failure of that project.
- By which the risk involved in developing the software (project) is known.

COCOMO MODEL: Constructive Cost Estimation Model

- This model is a type of cost estimation model.
- Which is able to evaluate the cost of any project (software) package to a great extent.
- Within the COCOMO Model (Constructive Cost Estimation Model), the use of the effort equation, the number of person-months to develop the project, is very important.
- Inside this model, the starting estimate (also called the nominal estimate) has to be used to do this using a static single variable equation.
- To define the size of the project in any one use KDLOC(Kilo Delivered Lines of Code).

COCOMO MODEL: Constructive Cost Estimation Model

- And to find out the size is done by this equation which is given below.

$$Ei=a*(KDLOC)b$$

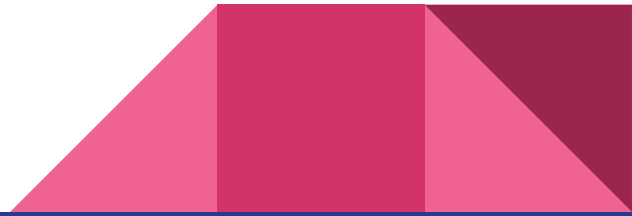
- In this model, all the different features of the project are determined by making a set.
- On the basis of the source code of the project (software) the evaluation of the project (software) development can be estimated at the beginning.

What are the Steps required in this Model?

COCOMO MODEL: The steps required in this model are:

- On the basis of the source code of the project (software) the evaluation of project (software) development can be estimated at the beginning.

- In this model, all the different features of the project are determined by making a set.



COCOMO MODEL: Types

COCOMO MODEL: The types in this model are:

Type of COCOMO Model (Constructive Cost Estimation Model)

- Organic
- Semi Detached
- Embedded

COCOMO MODEL: The types in this model are:

1.Organic:

- To develop any project, it can be considered as an organic type.
- To develop any project (software application program), it is well understood by the development team to use any program in the project.
- Due to which the size of the project is reduced to a great extent
- and all the members of the team get help in developing the same program of the project.
- Examples of this type of project are business systems, simple inventory management systems, and data processing systems.

COCOMO MODEL: The types in this model are:

2. Semi Detached:

- Any project (software) can be considered semi detached.
- If some experienced and inexperienced developers are in the same team in your team.
- So the developer in the team may have some experience related to the project but may be unfamiliar with the project (software) being developed.
- Talking about the examples of semi detached, a new operating system (OS), Database Management System (DBMS) in it.

COCOMO MODEL: The types in this model are:

3. Embedded:

- If any project (software) is in development then it can be considered as an embedded type.
- That project (software) is combined with hardware.
- The model from which this project has been developed can also have very hard rules.
- Example ATM etc.

- Bohem has given three categories to develop the project.
- By KLOC(Kilo Line of code) on the basis of the size of the project (in a unit of person month) and at the time of development, a different set of each expression is created to predict the project (software).
- And the risks are taken care of in the development of the project (software).

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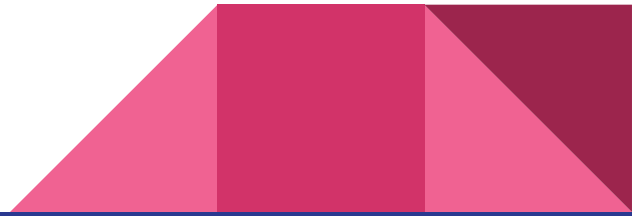

COCOMO MODEL: Stages

COCOMO MODEL: The stages in this model are:

According to Boehm, the cost of software can be estimated in three stages.

Basic COCOMO Model

Intermediate COCOMO Model

Detailed/Complete COCOMO Model

COCOMO MODEL: The stages in this model are:

1. Basic COCOMO Model

- COCOMO Model (Constructive Cost Estimation Model) - is a model that helps in finding the exact size based on the project parameters.
- The Basic COCOMO Model is a model that is constant and manages the size of all functions of effort and cost in project development.

COCOMO MODEL: The stages in this model are:

1. Basic COCOMO Model

- This model is used to develop most small and middle sized projects.

Effort=a1*(KLOC) a2 PM

Tdev=b1*(efforts)b2 Months

KLOC 1,a2,b1,b2= Each group of project has a constant

Tdev = is the estimated time taken to develop the software. Which is shown in the monthly.

Effort= KLOC(Kilo Line of code) is the approximate size of any project software.

PM= Person Month

COCOMO MODEL: The stages in this model are:

2. Intermediate cocomo model

- This model is an extension of the basic COCOMO.
- Intermediate COCOMO computes the software development effort as a function of program size and a set of cost drivers.
- Cost drivers determine the time and effort involved in the project.
- This model gives better results than the basic model as cost drivers are used in it.

COCOMO MODEL: The stages in this model are:

3. Complete cocomo model

- This model is an extension of the intermediate COCOMO
- This model differs from the intermediate model in that it uses effort multipliers for each phase of the project.
- In complete COCOMO the cost of each subsystem is estimated separately.
- Errors due to this method are very less.
- The drawback of basic and intermediate COCOMO is that it treats the software project as a single homogeneous entity.
- COCOMO removes this deficiency completely.
- Uses very complex procedures to calculate the complete COCOMO estimation.

COCOMO MODEL: Phases

COCOMO MODEL: The stages in this model are:

There are some 6 phases of this model. which they use.

Planning and requirements

System structure

Complete structure

Module code and test

Integration and test

cost constructive model