**Jinnah University for Women**

**Department of Computer Science & Software Engineering**



**ASSIGNMENT 2**

**Research Topic Name:**

**OpenECOCOMO: The Algorithms and Implementation of Extended COst COnstructive MOdel (E-COCOMO)**

Group 9:

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***SUMMARY:***

Traditional software package development approaches are obsoleting day by day and therefore the place is being taken by some new evolved approaches. Cleanroom development approach, Agile development approach, etc. because of the evolution in development methodology there's a powerful want of evolution in estimation models additionally. during this work we've planned AN extended version of COCOMO, that's E-COCOMO, and supported this model a tool has been enforced and referred to as OpenECOCOMO. The evolved model is planned for the new development methodologies and includes some additional factors for estimation utilized in these new approaches  
  
The original COCOMO stands for Constructive price Model. The word "constructive" implies that the complexness of the model may be understood owing to the openness of the model, which allows precisely to grasp WHY the model provides the estimates it will. Constructive Cost Model COCOMO is an algorithmic software cost estimation model developed by Barry Boehm. The model uses a basic regression formula, with parameters that are derived from historical project data and current project characteristics. COCOMO was first published in 1981 by Software Engineering Economics as a model for estimating effort, cost, and schedule for software projects.

The model was initially printed by Dr. Barry Jakob Behmen in 1981 and mirrored the software package development practices of those days. Since now several efforts have been tired in the development of software package development techniques. a number of the changes were moving off from mainframe long instruction execution to real-time applications, arduousness in effort in building software package for reusing, new reasonably system development in as well as off-the-peg software package parts (COTS) and payment the maximum amount effort on coming up with and managing the software package development method as was once spent making the merchandise. The

Boehm planned 3 levels of the model:

* Basic
* Intermediate
* detailed.

The **Basic COCOMO'** model may be a single-valued, static model that computes software package development effort (and cost) as operation of program size expressed in calculable thousand delivered supply directions. the formula of basic Cocomo is :

E= ai(KLOC)bi\*EAF  
D= ci(E)di

The **Intermediate COCOMO** model computes software package development effort as an operation of program size and a collection of fifteen "cost drivers" that embody subjective assessments of product, hardware, personnel, and project attributes. the formula of intermediate Cocomo is:

E=ab(KLOC)bb

D= cb(E)db

The **Detailed or elaborated COCOMO** model incorporates all characteristics of the intermediate version with AN assessment of the value driver’s impact on every step (analysis, design, etc.) of the software package engineering method. the formula of detailed Cocomo is:

Ep = upE

Dp - ipD