COST ESTIMATION

CONSTRUCTIVE COST MODEL (COCOMO MODEL) :

ONCE A PROCESS MODEL IS FINALEZED FOR A SOFTWARE DEVELOPMENT, SOFTWARE PROJECT MANAGEMENT BEGINS WITH A SET OF ACTIVITIES THAT ARE COLLECTIVELY CALLED PROJECT PLANNING.

PROJECT PLANNING ENCOMPASSESS FIVE MAJOR ACTIVITIES:

- ESTIMATION
- SCHEDULING
- RISK ANALYSIS
- QUALITY MANAGEMENT PLANNING
- CHANGE MANAGEMENT PLANNING

Cocomo (Constructive Cost Model) is a regression model based on LOC, i.e number of Lines of Code.

Key parameters which define the quality of any software products, which are also an outcome of the Cocomo are primarily Effort & Schedule:

● Effort: Amount of labor that will be required to complete a task. It is measured in person-months units.
● Schedule: Simply means the amount of time required for the completion of the job, which is, of course, proportional to the effort put. It is measured in the units of time such as weeks, months.

According to boehms' definition , this project "ONLINE VOTING SYSTEM" comes Under semidetached category !

semi-detached –A software project is said to be a Semi-detached type if the vital characteristics such as team-size, experience, knowledge of the various programming environment lie in between that of organic and Embedded. The projects classified as Semi-Detached are comparatively less familiar and difficult to develop compared to the organic

ones and require more experience and better guidance and creativity. Eg: Compilers or different Embedded Systems can be considered of Semi-Detached type.

The Intermediate COCOMO formula now takes the form:

E=(a(KLOC)^b)*EAF

where, E represents the estimation
a and b are constants ,

EAF is effort adjustment factor

A is taken to be 3.0 and b is taken to be 1.12

Classification of Cost Drivers and their attributes:

- Product
- Hardware
- Personal
- Project

Hence EAF IS CALCULATED BY MULTIPLYING THE COST DRIVER ATTRIBUTES AND THEN USED FOR ESTIMATION

EAF = required software reliabaility * size of application database * complexity of the product*runtime performance constraints*memory constraints * volatility of the virtual machine * environemnt * required turnaruound time * analyst capability * applictations experience * software engineer capability * virtual machineexperience*programminglanguage experience * application of software engineering * methods * use of software tools * required development schedule .

EAF = 1 * 0.75 * 1 * 0.75*1*1*1* 0.75*1.25*1*1*1*1.12* 1 = 0.590625

HENCE
E = (3 * ((2)^1.12)) * 0.590625

THEREFORE ,
ESTIMATED VALUE = 3.8511166691