Software Project Management CS615

Assignment # 5_Solution ***10***

Question # 1

Sr. No.	Source Line of Code (SLOC)	Function Point Analysis (FP)	Constructive Cost Model (COCOMO)
1	This technique is solely dependent on Technology and Programming Language to be used for development.	FP Technique is independent of both Technology and Programming Language.	COCOMO is although independent of Technology and Programming Language but at times it uses SLOC as an input for estimation.
2	Inflexible to meet the changes in Technology and Programming Language during the project development life.	Flexible to accommodate change in Technology and Programming Language during the project development.	COCOMO is also bendable enough to put up changes in Technology and Programming Language.
3	Difficult to estimate the SLOC required for each phase of the SDLC.	Easy to estimate the size for each SDLC phase	Provides flexibility to estimate the size for not only various kinds of projects but for their phases as well.
4	Does not care about General System Characteristics	Explicitly evaluate the General System Characteristics in terms of Adjustment Factor.	General System Characteristics can be evaluated in Intermediate COCOMO.
5	Easiest to calculate as compare to FP and COCOMO as no mathematics involved.	Moderately difficult to use as compare to SLOC. Little mathematics is required to manipulate Adjusted and Unadjusted FPs.	Extensive mathematics is required to calculate the size. This techniques is moderately difficult as compare to SLOC and FP.

Question # 2

Solution:

Suppose an office automation system must be designed and implemented. From the requirements it was clear that there will be four major modules in the system. The project type fall in an organic category. The modules with estimated KDL were estimated as follows:

DATA ENTRY	0.8 KDL
DATA UPDATE	0.9 KDL
QUERY	0.7KDL
REPORT GENERATOR	1.2KDL
Total KDL/KDLCO	**3.6**

From the requirements the ratings of the different cost driver attributes was assessed. These ratings, along with their multiplying factors are:

Complexity	high	2.15
Storage	high	1.00
Experience	low	1.23
Programmer capability	low	1.20
EAF		**3.17**

All other factors had NOMINAL rating.

KDL= .8+.9+.7+1.2 = 3.6
al = 3.2 , a2 = 1.05
EAF = 2.15*1.00*1.23*1.20 = 3.17

$$\mathbf{E_i = a1 * (KDL)^{a2}}$$

Initial effort estimate: Ei = 3.2 * 3.6^1.05= **12.28 PM**

$$\mathbf{E = EAF * E_i}$$

Adjusted Effort Estimate E = 3.17 * 12.28 = **38.92 PM**