**Q1:** For Organic, Semi-detached, and embedded projects . Calculate Effort, Development time and number of people required. (LOC = 50000 Or KLOC = 50).

Solution:

Given,

KLOC = 50

For Organic Project:

E= ab (KLOC)bb

E = (2.4)\*(50)1.05

E = 145.92 person-months

(approx. 146 person-months)

D = cb(E)db

D = (2.5)\*( 145.92)0.38

D = 16.60 months

(approx. 17 months)

P = E/D

P = 145.92/16.60

P = 8.79 persons

(approx. 9 persons)

For Semi-Detached Project:

E= ab (KLOC)bb

E = (3.0)\*(50)1.12

E = 239.86 person-months

(approx. 240 person-months)

D = cb(E)db

D = (2.5)\*( 239.86)0.35

D = 17.01 months

(approx. 17 months)

P = E/D

P = 145.92/16.60

P = 14.09 persons

(approx. 14 persons)

For Embedded Project:

E= ab (KLOC)bb

E = (3.6)\*(50)1.20

E = 393.61 person-months

(approx. 3943 person-months)

D = cb(E)db

D = (2.5)\*( 393.61)0.32

D = 16.95 months

(approx. 17 months)

P = E/D

P = 393.61/16.95

P = 23.38 persons

(approx. 23 persons)

**Q2:** For Organic, Semi-detached, and embedded projects . Calculate Effort, Development time and number of people required. (LOC = 120000 Or KLOC = 120).

Solution:

Given,

KLOC = 120

For Organic Project:

E= ab (KLOC)bb

E = (2.4)\*(120)1.05

E = 365.89 person-months

(approx.366 person-months)

D = cb(E)db

D = (2.5)\*( 365.89)0.38

D = 23.55 months

(approx. 24 months)

P = E/D

P = 365.89/23.55

P = 15.53 persons

(approx. 9 persons)

For Semi-Detached Project:

E= ab (KLOC)bb

E = (3.0)\*(120)1.12

E = 639.44 person-months

(approx.639 person-months)

D = cb(E)db

D = (2.5)\*(639.44)0.35

D = 23.98 months

(approx. 24 months)

P = E/D

P = 639.44/23.98

P = 26.65 persons

(approx. 27 persons)

For Embedded Project:

E= ab (KLOC)bb

E = (3.6)\*(120)1.20

E = 1125.43 person-months

(approx. 1125 person-months)

D = cb(E)db

D = (2.5)\*( 1125.43)0.32

D = 23.67 months

(approx. 24 months)

P = E/D

P = 1125.43/23.67

P = 47.52 persons

(approx. 48 persons)

**Q2:** For Organic, Semi-detached, and embedded projects . Calculate Effort, Development time and number of people required. (LOC = 1210000 Or KLOC = 1210K).

Solution:

Given,

KLOC = 1210

For Organic Project:

E= ab (KLOC)bb

E = (2.4)\*( 1210)1.05

E = 4141.29 person-months

(approx. 4141 person-months)

D = cb(E)db

D = (2.5)\*(4141.29)0.38

D = 59.21 months

(approx. 59 months)

P = E/D

P = 4141.29/59.21

P = 69.93 persons

(approx. 70 persons)

For Semi-Detached Project:

E= ab (KLOC)bb

E = (3.0)\*(1210)1.12

E = 6508.26 person-months

(approx. 6508 person-months)

D = cb(E)db

D = (2.5)\*(6508.26)0.35

D = 54.03 months

(approx. 54 months)

P = E/D

P = 6508.26/54.03

P = 120.45 persons

(approx. 120 persons)

For Embedded Project:

E= ab (KLOC)bb

E = (3.6)\*(1210)1.20

E = 18015.44 person-months

(approx. 18015 person-months)

D = cb(E)db

D = (2.5)\*( 18015.44)0.32

D = 57.51 months

(approx. 58­­­­­­ months)

P = E/D

P = 18015.44 /57.51

P = 313.25 persons

(approx. 313 persons)