

Perhitungan COCOMO

- **Organik**

$$\begin{aligned} E &= a * (KLOC^b) \\ &= 2.4 * (3.00^{1.05}) \\ &= 2.4 * 3.17 \\ &= 7.61 \end{aligned}$$

$$\begin{aligned} T &= c * (E^d) \\ &= 2.5 * (7.61^{0.38}) \\ &= 2.5 * 2.16 \\ &= 5.40 \text{ bulan} \end{aligned}$$

$$\begin{aligned} P &= E / T \\ &= 7.61 / 5.40 \\ &= 1.41 \text{ man-day per bulan} \end{aligned}$$

Jumlah Pengembang Man-Day (E) : 7.61
Durasi Proyek (T) : 5.4 bulan
Produktivitas (P) : 1.41 man-day per bulan
Digenapkan 2,5 bulan dengan 3 orang

- **Semi-detached**

$$\begin{aligned} E &= a * (KLOC^b) \\ &= 3.0 * (3.00^{1.12}) \\ &= 3.0 * 3.42 \\ &= 10.27 \end{aligned}$$

$$\begin{aligned} T &= c * (E^d) \\ &= 2.5 * (10.27^{0.35}) \\ &= 2.5 * 2.26 \\ &= 5.65 \text{ bulan} \end{aligned}$$

$$\begin{aligned} P &= E / T \\ &= 10.27 / 5.65 \\ &= 1.82 \text{ man-day per bulan} \end{aligned}$$

Jumlah Pengembang Man-Day (E) : 10.27
Durasi Proyek (T) : 5.65 bulan
Produktivitas (P) : 1.82 man-day per bulan
Digenapkan 3 bulan dengan 4 orang

- **Embedded**

$$\begin{aligned} E &= a * (KLOC^b) \\ &= 3.6 * (3.00^{1.20}) \\ &= 3.6 * 3.74 \\ &= 13.45 \end{aligned}$$

$$\begin{aligned} T &= c * (E^d)R \\ &= 2.5 * (13.45^{0.32}) \\ &= 2.5 * 2.30 \\ &= 5.74 \text{ bulan} \end{aligned}$$

$$\begin{aligned} P &= E / T \\ &= 13.45 / 5.74 \\ &= 2.34 \text{ man-day per bulan} \end{aligned}$$

Jumlah Pengembang Man-Day (E) : 13.45
Durasi Proyek (T) : 5.74 bulan
Produktivitas (P) : 2.34 man-day per bulan
Digenapkan 3 bulan dengan 6 orang

Estimasi Biaya

- **Organik**

Estimasi Biaya:

$$\begin{aligned} &(\text{Baris Code} * \text{Harga Perbaris}) + (\text{Jumlah Karyawan} * \text{Gaji perBulan}) * \text{Waktu} + \\ &\text{Keuntungan\%} \\ &= (3.000 * 2.500) + (3 * 3000000) * 2.5 \text{ bulan} + 15\% \\ &= 7.500.000 + 9.000.000 * 2.5 \text{ bulan} + 15\% \\ &= 7.500.000 + 28.875.000 \\ &= \text{Rp } 33.375.000 \end{aligned}$$

- **Semi-detached**

Estimasi Biaya:

$$\begin{aligned} &(\text{Baris Code} * \text{Harga Perbaris}) + (\text{Jumlah Karyawan} * \text{Gaji perBulan}) * \text{Waktu} + \\ &\text{Keuntungan\%} \\ &= (3.000 * 2.500) + (4 * 3.000.000) * 3 \text{ bulan} + 15\% \\ &= 7.500.000 + 12.000.000 * 3 \text{ bulan} + 15\% \\ &= 7.500.000 + 41.400.000 \\ &= \text{Rp } 48.900.000 \end{aligned}$$

- **Embedded**

(Baris Code * Harga Perbaris)+(Jumlah Karyawan * Gaji perBulan) * Waktu +
Keuntungan%

$$= (3.000 * 2.500) + (6 * 3.000.000) * 3 \text{ bulan} + 15\%$$

$$= 7.500.000 + 18.000.000 * 3 \text{ bulan} + 15\%$$

$$= 7.500.000 + 62.100.000$$

$$= \text{Rp } 69.600.000$$