COCOMO (CONSTRUCTIVE COST MODEL)

The project size which is Line of code is estimated around 1600 Line of Code which is 1.6 KLOC (KLOC=1600/1000 i.e 1.6KLOC) and development time of 1 month with a team of 4 members. We can calculate effort and validate other parameters using the COCOMO basic model:

Constants for Organic Projects:

For the **Organic** development context:

1. **a=2.4**
2. **b=1.05**
3. **c=2.5**
4. **d=0.38**

Step 1: Calculate Effort

Formula for Effort is:

$$E = a \times s^b$$

Where S = 1.6KLOC

E = **3.905** person-months

Step 2: Calculate Development

$$D = c \times E^d$$

D = **3.528** months

Since D=3.528 months which is greater than 1 month and is not suitable for 4 developers so assumer **D=1**.

Step 3: Adjust Team Size for 1 Month

$$P = E \div D$$

P = 3.905 ÷ 1 = 1

Rounding up, **4 people** can realistically achieve this effort in approximately **1 month**.

Final Summary

For a project size of **1.6 KLOC**:

- **Effort**: 3.905 person-months
- **Development Time**: 1 month (adjusted)
- **Team Size**: 4 developers