**Cost analysis is done by COCOMO Model**

* Taking software project as organic type as team size is adequately small, the problem is well understood and has been solved in the past and also team members have nominal experience regarding the problem.
* a, b, c and d are constants for organic type system and the corresponding values are shown below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Values** | | | |
| **a** | **b** | **c** | **d** |
| 2.4 | 1.05 | 2.5 | 0.38 |

* KLOC- Kilo Lines of Codes is the estimated size of the software product.
* EAF - Effort Adjustment Factor. The factors and the corresponding values for developing this project are shown below, considering the values are high for organic type system below:

|  |  |
| --- | --- |
| **Factors** | **Values** |
| Software reliability(f1) | 1.0 |
| Application Database(f2) | 1.0 |
| Product complexity(f3) | 1.0 |
| Runtime Performance(f4) | 1.0 |
| Memory Constrints(f5) | 1.0 |
| Volatility of Virtual Machine(f6) | 1.0 |
| Turnaround time(f7) | 1.0 |
| Analyst capability(f8) | 1.0 |
| Application experience(f9) | 1.13 |
| S/w Engineer capability(f10) | 1.0 |
| Virtual machine experience(f11) | 1.0 |
| Programming language experience(f12) | 1.07 |
| Application of s/w engineering methods(f13) | 1.0 |
| Use of software tools(f14) | 1.0 |
| Required development schedule(f15) | 1.0 |

**COCOMO 1**

Here LOC = 2000

Therefore KLOC = 2000/1000 = 2

**For Organic:**

**Effort:**

a × (KLOC)b PM

= 2.4 × 21.05 PM

= 4.969271 PM

**Development Time:**

c × (Effort)d Months

= 2.5 × (4.969271)0.38 Months

= 4.5976 Months

≈ 5 Months

**COCOMO 2:**

**Effort Adjustment Factor (EAF):**

= f1 × f2 × f3 × f4 × f5 × f6 × f7 × f8 × f9 × f10 × f11 × f12 × f13 × f14 × f15

= 1.0 × 1.0 × 1.0 × 1.0 × 1.0 × 1.0 × 1.0 × 1.0 × 1.13 × 1.0 × 1.0 × 1.07 × 1.0 × 1.0 × 1.0

= 1.2091

**Effort:**

= 3.2 × (KLOC)1.05 × EAF PM

= 3.2 × (2)1.05 × 1.2091 PM

= 8.0111 PM