**4.3 Cost Analysis**

Constructive cost model is one of the most widely used and discussed software cost estimation model.

The basic COCOMO MODEL computes software development efforts and cost as a function of program size express in estimated line of code.

Table No 4.1: Cost Estimation 1

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Software Project | ab | bb | cb | db |
| Organic | 2.4 | 1.05 | 2.5 | 0.38 |
| Semi-Detached | 3.0 | 1.12 | 2.5 | 0.35 |
| **Embedded\*** | **3.6** | **1.20** | **2.5** | **0.32** |

**“A Tool for Managing Key Values pair on Oracle NoSQL Database” is an Organic project.**

Effort = ab KLOC^bb

Duration= cb KLOC^db

**4.4 Calculation**

Table No 4.2: Cost Estimation 2

|  |  |
| --- | --- |
| Function | Estimated LOC |
| Module 1(Login) | 60 |
| Module 2(Operation Selection) | 1000 |
| Module 3(Result) | 700 |
| **Total** | **1760** |

**This project is an Organic project, therefore**

ab=2.4bb=1.05cb=2.5db=0.38

Efforts = 2.4\*(1.76^1.05)

= 4.345 person-month

Duration = 2.5\*(1.76^0.38)

= 3.1 months

Number of peoples recommended = Efforts/Duration

= 4.345/3.1

= 1.5

= ~ 2 persons

**4.5 LOC based Estimation**

The average productivity for our product is: 600 LOC/month

The labor rate estimated is: Rs. per month 1000

Thus the cost per line of code is: approximately Rs.6

Base on LOC estimated and historical productivity data,

**Total estimated project cost is: Rs. 22560/-**