**3.2.**

On Wednesday, April 10th, our team decided to use Post-Architecture Model to implement the estimation technique to calculate the estimated cost and in turn the price for our project. We decided that the process control software will have **40 KSLOC** for the fact that we used Java as our implementation language.

Estimated Size for the project = 40 KSLOC

Required Software Reliability = 1.26 very high

Product Complexity = 1.34 very high

Execution Time Constraint = 1.29 very high

Programmer Capability = 0.76 very high

Platform Experience = 0.85 very high

Multisite Development = 0.86 very high

Normal cost drivers: Everything else.

The implementation is as follows:

Compute **the constant b** as follows:

b = \_\_\_\_\_\_\_\_?

b = 0.91 + 0.01 \* (SF 1 + · · · + SF 5)

= 0.91 + 0.01 \* (3.72 + 3.04 + 4.24 + 3.29 +4.68)

= 0.91 + 0.01 \* 18.97

b = 1.0997

Compute **the effort** as follows:

a = 2.94 (constant)

b = 1.0997

size = 40 KSLOC

PM = \_\_\_\_\_\_\_\_?

PM = a\*sizeb \*EM. (size =40)

PM = 2.94 \* (40)1.0997 \* 1.26 \* 1.34 \* 1.29 \* 0.76 \* 0.85 \* 0.86

PM = 205.555 person-month

The development time **(TDEV)** is:

b = 1.0997

c = 3.67

d = 0.28

PM = 205.555

TDEV = \_\_\_\_\_\_\_\_?

TDEV = c\*PMd+0.2\*(b-0.91)

= 3.67 \* (205.555)0.28+ 0.2\*(1.0997-0.91)

= 3.67 \* (205.555)0.28+ 0.03794

= 3.67 \* (205.555)0.31794

TDEV = 20 months

The number of developers **(N)** is:

N = \_\_\_\_\_\_\_\_?

N =

=

N = 10.28 persons

**3.3. Estimated cost of hardware** products (such as servers, etc.)

|  |  |  |
| --- | --- | --- |
| Hardware | Count | Estimated Cost (US dollar) |
| Server PC | 1 | 8000 |
| Engineer Laptops | 15 | 15,000 |
| Telephone | 3 | 1000 |
| Printers | 2 | 500 |
| Other components | unknown | 2000 |

**3.4. Estimated cost of software** products (such as licensed software, etc.)

|  |  |  |
| --- | --- | --- |
| Software | Count | Estimated cost (US dollar |
| Window Server client access licenses | 2 | 2000 |
| Microsoft Exchange server | 1 | 700 |
| Microsoft SharePoint server | 1 | 900 |
| Microsoft SQL server (database service) | 1 | 1500 |

**3.5.** **Estimated cost of personnel** (number of people to code the end product, training cost after installation)

|  |  |
| --- | --- |
| Category | Estimated cost (US dollar) |
| Recruiting expenses | 1000 -1200 |
| Basic salary | 30,000 – 50,000 |
| Benefits | 4000 - 6000 |
| Training cost | 1500 -2000 |
| Employment taxes | 5000- 8000 |