**3.2)**

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 53 KSLOC for the fact that we used Java as our implementation language.

Very high cost drivers: Software Reliability, Product Complexity, Execution time constraint, Programmer Capability, Platform Experience, Multisite Development.

Normal cost drivers: Everything else.

The implementation is as follows:

**-First compute the constant b as follows:**

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 = 1.0997

**-Compute the effort as follows:**

PM = a\*sizeb \*EM. (size =53).

PM = a\*size\*EM = 2.94\*531.0997\*1.26\*1.34\*1.29\*0.76\*0.85\*0.86 = 280.110

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

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

= 3.67\*280.1100.28+ 0.2\*(1.0997-0.91)

= 3.67\*280.1100.28+ 0.03794

= 3.67\*280.1100.31794

= 22 months

**-The number of developers is:**

N = PM/TDEV = 280.110/22 = 13

**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. [5 POINTS] 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 |