**CSE 471(SEC-03)**

**Course Name: System Analysis and Design**

**Title of the Project: BLOOD BANK MANAGEMENT SYSTEM**

**Group Number: 03**

**Group Name: Team Thanos**

**Submitted by:**

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**Estimate system size:**

System size is an activity in software engineering that is used to determine or estimate the size of a software application or component in order to be able to implement other software project management activities. It is like measure of program size that is based on the system’s number and complexity of inputs, outputs, queries, files, and program interfaces. The project manager records the total number of each component that the system will include, and then breaks down the number to show the number of components that have low, medium, and high complexity. For the Blood Bank Management System we will use COCOMO model to estimate the system size. The components of the system along with the complexity is given below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Description |  | Complexity | | |  |
| Total number | Low | Medium | High | Total |
| Inputs | 7 | 4 \*3 | 2\*4 | 1\*6 | 26 |
| Outputs | 19 | 10\*4 | 5\*5 | 4\*7 | 93 |
| Queries | 30 | 17\*3 | 8\*4 | 5\*6 | 113 |
| Files | 40 | 15\*7 | 15\*10 | 10\*15 | 405 |
| Program Interfaces | 4 | 3\*5 | 0\*7 | 1\*10 | 25 |
| Total(TUFP) |  |  |  |  | 665 |

**Overall system:**

Processing complexity

|  |  |
| --- | --- |
| Data communications | 3 |
| Heavy use configuration | 2 |
| Transaction Rate | 0 |
| End-user efficiency | 5 |
| Complex processing | 0 |
| Installation ease | 0 |
| Multiple sites  Performance |  |
| Distributed functions | 0 |
| Online data entry | 2 |
| Online update | 2 |
| Reusability | 2 |
| Operational ease | 4 |
| Extensibility | 0 |
| Total Processing complexity | 20 |

Here the number shows the level of effect on processing complexity. 0 means no effect on processing complexity.

From this we can get the **Adjusted Project Capacity**:

APC factor has a baseline value 0.65

**0.65 + (0.01\*20) = 0.85**

**Total Adjusted Function Points (TAFP):**

**0.85(APC) \* 665(TUFP) = 565.25**

**Lines of code:**

|  |  |  |
| --- | --- | --- |
| Language | Approximate number of lines of code per function point | Total |
| JAVASCRIPT | 22 | 14630 |
| PHP | 27 | 17955 |

**Estimate effort(person months):** The formula to find out the estimate effort is

**1.4\*KLOC (KILO LINE OF CODES)**

So for the blood bank management system we use JAVASCRIPTS, PHP. So we have to estimate effort for each language.

For JAVASCRIPT

**1.4 \* 14.63 = 20.482**

So, to develop the system in JAVASCRIPT we need 17.14 person-months effort.

For PHP

**1.4 \* 17.95= 25.13**

So, to develop the system in JAVASCRIPT we need 21.04 person-months effort.

**Estimate Time required**: The formula to find out the estimate time required is

**3.0\***

So for the blood bank management system estimate time required

For JAVASCRIPT

**3.0 \* = 8.208 (months)**

For PHP

**3.0 \* = 8.78 (months)**