**Project Management Document**

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| Function Type Functional Complexity Total Function Type Totals |
| ILFs \_\_\_\_2\_\_\_\_ Low X 7 = \_14\_\_\_\_\_\_\_\_  \_\_\_\_\_2\_\_\_ Medium X 10= \_20\_\_\_\_\_\_\_\_  \_\_\_\_\_2\_\_\_ High X 15= \_30\_\_\_\_\_\_\_\_  \_\_\_\_\_64\_\_\_\_\_\_\_\_ |
| EIFs \_\_\_\_\_1\_\_\_ Low X 5 = \_\_5\_\_\_\_\_\_\_  \_\_\_\_\_3\_\_\_ Medium X 7 = \_\_21\_\_\_\_\_\_\_  \_\_\_\_\_-\_\_\_ High X 10= \_\_-\_\_\_\_\_\_\_  \_\_\_\_\_\_26\_\_\_\_\_\_\_ |
| EIs \_\_\_\_2\_\_\_\_ Low X 3 = \_\_6\_\_\_\_\_\_\_  \_\_\_\_1\_\_\_\_ Medium X 4 = \_\_4\_\_\_\_\_\_\_  \_\_\_\_1\_\_\_\_ High X 6= \_\_6\_\_\_\_\_\_\_  \_\_\_\_\_16\_\_\_\_\_\_\_\_ |
| EOs \_\_\_\_1\_\_\_\_ Low X 4 = \_\_\_4\_\_\_\_\_\_  \_\_\_\_2\_\_\_\_ Medium X 5 = \_\_\_10\_\_\_\_\_\_  \_\_\_\_3\_\_\_\_ High X 7= \_\_\_\_21\_\_\_\_\_  \_\_\_\_\_35\_\_\_\_\_\_\_\_ |
| EQs \_\_\_3\_\_\_\_\_ Low X 3 = \_\_9\_\_\_\_\_\_\_  \_\_\_-\_\_\_\_\_ Medium X 4 = \_\_-\_\_\_\_\_\_\_  \_\_\_2\_\_\_\_\_ High X 6= \_\_12\_\_\_\_\_\_\_  \_\_\_\_\_21\_\_\_\_\_\_\_\_  Total Unadjusted Function Point Count \_\_\_\_\_162\_\_\_\_\_\_\_ |

VAF = (TDI x 0.01) + 0.65

FP = UFP x VAF

FP = 162 x 1.04

FP = 168.48

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|  | **Work Rate** | **Availability** |
| **SYSTEM DESIGNER 1 (SD1)** | 1.5 | 80% |
| **SYSTEM DESIGNER 2 (SD2)** | 1.0 | 100% |
| **SYSTEM DESIGNER 2 (SD3)** | 0.5 | 100% |
| **PROGRAMMER 1 (P1)** | 2.0 | 40% |
| **PROGRAMMER 2 (P2)** | 0.5 | 100% |
| **PROGRAMMER 3 (P3)** | 1.0 | 60% |
| **TECHNICAL AUTHOR 1 (TA1)** | 1.0 | 100% |
| **TECHNICAL AUTHOR 2 (TA2)** | 0.5 | 50% |
| **TECHNICAL AUTHOR 3 (TA3)** | 0.5 | 80% |

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| **General System Characteristics (GSCs)** | **Degree of Influence (DI) 0-5** |
| 1. Data communications | 4 |
| 1. Distributed data processing | 3 |
| 1. Performance | 3 |
| 1. Heavily used configuration | 2 |
| 1. Transaction rate | 4 |
| 1. Online data entry | 1 |
| 1. End-user efficiency | 5 |
| 1. Online update | 2 |
| 1. Complex processing | 2 |
| 1. Reusability | 4 |
| 1. Installation ease | 3 |
| 1. Operational ease | 2 |
| 1. Multiple sites | 1 |
| 1. Facilitate change | 3 |
| **TOTAL DEGREE OF INFLUENCE (TDI)** | **39** |
| **VALUE ADJUSTMENT FACTOR (VAF)** | **1.04** |

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| **PARAMATERS** | **NUMBERS** |
| User inputs | 2 simples, 1 average, 1 complex |
| User outputs | 1 simple, 2 average, 3 complexes |
| User inquiries | 3 simples, 2 complexes |
| External interface | 1 simple, 3 averages |
| Files | 2 simples, 2 averages, 2 complexes |

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|  | **Design** | **Programming** | **Documentation** |
| **Easy programs** | 1 month | 2 months | 1 month |
| **Average programs** | 2 months | 3 months | 3 months |
| **Difficult programs** | 4 months | 5 months | 5 months |

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| **PROJECT-1** | **PROJECT -2** | **PROJECT -3** | **PROJECT -4** |
| AVERAGE | AVERAGE | DIFFICULT | EASY |

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| **TASK** | **SD-1**  **FACTOR= 0.84** | **SD-2**  **FACTOR= 1** | **SD-3**  **FACTOR= 2** |
| Design easy program  (1m) | 0.84 | 1 | 2 |
| Design average program  (3m) | 2.52 | 3 | 6 |
| Design difficult program  (5m) | 4.2 | 5 | 10 |
|  | **P-1**  **FACTOR= 1.12** | **P-2**  **FACTOR= 2** | **P-3**  **FACTOR= 1.67** |
| Program easy project  (2m) | 2.24 | 4 | 3.34 |
| Program average project  (3m) | 3.36 | 6 | 5.01 |
| Program difficult project  (6m) | 6.72 | 12 | 10.02 |
|  | **TA-1**  **FACTOR= 1** | **TA-2**  **FACTOR= 4** | **TA-3**  **FACTOR= 2.5** |
| Document easy program  (1m) | 1 | 4 | 2.5 |
| Document average program  (2m) | 2 | 8 | 5 |
| Document difficult program (3m) | 3 | 12 | 7.5 |



SLOC for Project 1: C++ -> 168.48 x 55 = 9.26 KLOC

SLOC for Project 2: Java -> 168.48 x 53 = 8.92 KLOC

SLOC for Project 3: LISP -> 168.48 x 64 = 10.78 KLOC

SLOC for Project 4: VisualC++ -> 168.48 x 34 = 5.72 KLOC

C = 2.8 / K = 1.20 (Embedded) / EAF = 1.00 x 1.21 x 0.95 x 0.83 = 0.95

WM for Project 1: 2.8 x (9.26^1.12) x 0.95 = 38.44 man-month ->Elapsed = 38.44/3 = 12.81 months

WM for Project 2: 2.8 x (8.92^1.12) x 0.95 = 36.8 man-month -> Elapsed = 36.8/3 = 12.26 months

WM for Project 3: 2.8 x (10.78^1.12) x 0.95 = 46.13 man-month -> Elapsed = 46.13/3 = 15.37 months

WM for Project 4: 2.8 x (5.72^1.12) x 0.95 = 21.56 man-month -> Elapsed = 21.56/3 = 7.18 months

Complexity of the product is nominal. (1.00).

Memory constraints are very high (1.21).

Programming language experience is high (0.95).

Use of software tools are very high (0.83).

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| MONTHS  PROJECTS | 1m | | 2m | 3m | | 4m | | 5m | | 6m | 7m | 8m | 9m | 10m | 11m | 12m | 13m | 14m | 15m |
| PROJECT-1  (AVERAGE) | SD-1 | | | | |  | |  | |  |  |  |  |  |  |  |  |  |  |
| P-2 | | | | | | | | | |  |  |  |  |  |  |  |  |  |
| TA-2 | | | | | | | | | | | |  |  |  |  |  |  |  |
| PROJECT-2  (AVERAGE) | SD-3 | | | | | | | | | |  |  |  |  |  |  |  |  |  |
|  |  | | |  | |  | |  | | P-2 | | | | | |  |  |  |
| TA-3 | | | | | | | | |  |  |  |  |  |  |  |  |  |  |
| PROJECT-3  (DIFFICULT) |  | |  |  | | SD-1 | | | | | |  |  |  |  |  |  |  |  |
| P-1 | | | | | | | | | | |  |  |  |  |  |  |  |  |
|  | |  |  | |  | |  | | TA-3 | | | | | | | |  |  |
| PROJECT-4  (EASY) | SD-2 | |  |  | |  | |  | |  |  |  |  |  |  |  |  |  |  |
| P-3 | | | | |  | |  | |  |  |  |  |  |  |  |  |  |  |
| TA-1 | |  |  | |  | |  | |  |  |  |  |  |  |  |  |  |  |

**Gantt Chart**