Team Alpha

COCOMO Effort Estimation Report

AlphaSolutions Inventory Management System (AIMS)

Category	Cost Driver	Rating	Multiplier
Product Attributes	RELY (Required Reliability)	High	1.15
Product Attributes	DATA (Database size)	Nominal	1.0
Product Attributes	CPLX (Product complexity)	High	1.15
Hardware Attributes	TIME (Execution Time Constraint)	Nominal	1.0
Hardware Attributes	STOR (Main storage constraint)	Nominal	1.0
Hardware Attributes	VIRT (Virtual Machine Volatility)	Nominal	1.0
Hardware Attributes	TURN (Computer Turnaround time)	Low	0.87
Personnel Attributes	ACAP (Analyst Capability)	High	0.86
Personnel Attributes	AEXP (Applications Experience)	High	0.91
Personnel Attributes	PCAP (Programmer Capability)	Very High	0.70
Personnel Attributes	VEXP (Virtual Machine Experience)	Nominal	1.0
Personnel Attributes	LEXP (Programming Language Experience)	Nominal	1.0
Project Attributes	MODP (Modern Programming Practices)	Nominal	1.0
Project Attributes	TOOL (Use of Software Tools)	High	0.91
Project Attributes	SCED (Required Development Schedule)	Nominal	1.0

COCOMO Calculations

1. Size = KLOC = 5512 / 1000 = 5.512

2. Effort = a * (KLOC^b) * EAF
3. = 0.57358 * (5.512 ^ 1.05) * 11.02 ≈ 12 Person-Months (PM)

4. Duration = c * (Effort ^ d)

5. = 2.5 * (12 ^ 0.38) ≈ 6.22 Months

6. Staff = Effort / Duration
   12 / 6.22
   ≈ 2 Persons

Conclusion:
Based on the COCOMO effort estimation, the AlphaSolutions IMS project will require approximately **12 person-months** of effort, with an estimated schedule of **6.22 months**. The project team should consist of at least **2 full-time developers** to meet the schedule. This estimation will guide project planning, resource allocation, and timeline management.