Project Name: Course Scheduling System

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Exp4: To calculate function point for given problem statement System.

Exp5: To estimate project cost using COCOMO Model for given

Total Unadjusted Function Points (UFP): 98

- Data Communications: 4
- Distributed Data Processing: 3
- Performance: 4
- Heavily Used Configuration: 2
- Transaction Rate: 3
- Online Data Entry: 4
- End-User Efficiency: 2
- Online Update: 3
- Complex Processing: 4
- Reusability: 3
- Installation Ease: 1
- Operational Ease: 2
- Multiple Sites: 3
- Facilitate Change: 4

The formula for VAF is: $VAF=0.65+(0.01\times TAF)$

Substituting the TAF value: $VAF=0.65+(0.01\times 42)=0.65+0.42=1.07$

$AFP=98\times 1.07=104.86\approx 105$

Here, the Effort per FP is 5 hours:}Estimated Effort=AFP×Effort per FP

Calculation: Estimated Effort=105×5=525 hours

Total Unadjusted Function Points (UFP): 98

Total Adjustment Factor (TAF): 42

Value Adjustment Factor (VAF): 1.07

Adjusted Function Points (AFP): 105

Estimated Development Effort: 525 hours

Key Parameters Considered and Results

Parameters for COCOMO Model (Basic, Organic Type):

- **Estimated Project Size**: 10 KLOC (10,000 lines of code)
- **Effort Constants**:
  - a=2.4a = 2.4a=2.4
  - b=1.05b = 1.05b=1.05
- **Duration Constants**:
  - c=2.5c = 2.5c=2.5
  - d=0.38d = 0.38d=0.38

From the FPA, the estimated development effort is **525 hours**. Assuming **1 person-month = 152 hours** (standard industry approximation):3.45 person-months

For the purpose of COCOMO calculations, let's assume that **10 person-months approximately equates to 1 KLOC**. Then: =3.45/10≈0.345 KLOC

Effort (Person-Months)=a×(KLOC)b=2.4×(0.345)1.05≈0.87 person-months

Summary of COCOMO Results

- **Estimated Project Size**: 0.345 KLOC
- **Effort (Person-Months)**: 0.87 person-months
- **Duration (Months)**: 1.03 months
- **Estimated Team Size**: 4 person