

UCP calculation (refer this)				
Total No. of simple use cases		5		
Total No. of average use cases		3		
Total No. of complex use cases		3		
Unadjusted Use Case Weight (UUCW)	UUCW = (Total No. of Simple Use Cases x 5) + (Total No. Average Use Cases x 10) + (Total No. Complex Use Cases x 15)	100		
Total No. of simple actors		0		
Total No. of average actors		0		
Total No. of complex actors		2		
Unadjusted Actor Weight (UAW)	UAW = (Total No. of Simple actors x 1) + (Total No. Average actors x 2) + (Total No. Complex actors x 3)	6		
Factor	Description	Weight	Your score	Total
T1	Distributed system	2	4	8
T2	Response time/performance objectives	1	4	4
T3	End-user efficiency	1	1	1
T4	Internal processing complexity	1	0	0
T5	Code reusability	1	1	1
T6	Easy to install	0.5	0	0
T7	Easy to use	0.5	3	1.5
T8	Portability to other platforms	2	3	6
T9	System maintenance	1	0	0
T10	Concurrent/parallel processing	1	2	2
T11	Security features	1	3	3
T12	Access for third parties	1	0	0
T13	End user training	1	0	0
	Total TF	26.5		
Technical Complexity Factor (TCF)	TCF = $0.6 + (TF/100)$	0.865		
Factor	Description	Weight	Your score	Total
E1	Familiarity with development process used	1.5	1	1.5
E2	Application experience	0.5	0	0
E3	Object-oriented experience of team	1	1	1
E4	Lead analyst capability	0.5	0	0
E5	Motivation of the team	1	5	5
E6	Stability of requirements	2	4	8
E7	Part-time staff	-1	5	-5
E8	Difficult programming language	-1	3	-3
	Total EF	7.5		
Environmental Complexity Factor (ECF)	ECF = $1.4 + (-0.03 \times EF)$	1.175		
Use Case Points (UCP)	UCP = (UUCW + UAW) x TCF x ECF	107.73575		
How many hours per use case will be used?	9			
Estimated effort	969.62175			
COCOMO Calculation (refer lecture slides and this)				
KLOC frontend	KLOC backend	Total		
3.898	0.939	4.837		
Development mode	Project characteristics			

	Size (a)	Innovation (b)	Deadline/constraints (c)	
Organic	Small (2.4)	Little (1.05)	Not tight (0.38)	
Semi-detached	Medium (3.0)	Medium (1.12)	Medium (0.35)	
Embedded	Large (3.6)	Greater (1.20)	Tight (0.32)	
a	2.4			
b	1.05			
c	0.35			
Development Efforts (MM)	a*(KLOC) ^b	12.56076624		
Effort and development time (TDEV)	2.5*MM ^c	6.06171698		