

calculate the project size using FPA

Function type	Simple	Average	Complex
Internal Logical File	7	10	15
External Interface File	5	7	10
External Input	3	4	6
External Output	4	5	7
External Inquiry	3	4	6

		Weighting Factor			Count
		Simple	Average	Complex	
Inputs	Member Registration	1			5
	Member Login	4			
Outputs	Member login confirmation		2		3
	Member Registration confirmation	1			
Inquiries	Validate member information		2		3
	View friends list	1			
Interfaces	Application server to database	3			6
	User to application server	3			
Total UFP					17

Value	Complexity Weighting Factor
Data communications	1
Heavily used configuration	0
Transaction rate	3
End-user efficiency	1
Complex processing	0
Installation ease	0
Multiplae sites	1
Performance	0
Distributed data processing	1
Online data entry	5
Online updating	0
Reusibility	0
Operational ease	1
Extensibility	4
Total Processing Complexity (PC)	17

Total Adujusted Function Points (TAFP) = $(0.65 + (0.01 * PC)) * TUPF$

Total Adujusted Function Points (TAFP) = $(0.65 + (0.01 * 17)) * 17 = 13.94$

Language Factor (LF) for Java assumed as = 38

Percentage of the programming languages = 100% Dart

Source Lines of Code (SLOC) = $TUPF * LF = 13.94 * 38 = 529.72$

COCOMO Model (our project is an application program)

	TDEV	Programmer Productivity	Development Time (Month)			
	Application Programs	$PM = 2.4 * (KDSI)^{1.05}$	$PM = 2.5 * (PM)^{0.38}$			
	Utility Programs	$PM = 3.0 * (KDSI)^{1.12}$	$PM = 2.5 * (PM)^{0.35}$			
	System Programs	$PM = 3.6 * (KDSI)^{1.20}$	$PM = 2.5 * (PM)^{0.32}$			
	Using the above formula for the application programs, the programmer productivity and the development time are as follows:					
	KLOC = 0.529 KLOC					
	Effort = $2.4 * (0.529)^{1.05} = 1.22$ person-month					
	Tdev = $2.5 * (1.22)^{0.38} = 2.69$ month					