

Function Point Analysis

For the Curriculum Data Management Software, the following are the counts –

	Simple	Average	Complex
• Inputs	10	14	3
• Outputs	12	11	5
• Data Stores	0	0	1
• Processing Inquiries	6	4	3
• Processing Updates	0	6	1
• External Interfaces	0	1	0

The function point counts are then weighed by their degree of complexity (weights shown below) –

	Simple	Average	Complex
• Inputs	2	4	6
• Outputs	3	5	7
• Data Stores	5	10	15
• Processing Inquiries	2	4	8
• Processing Updates	4	8	12
• External Interfaces	4	6	8

The function point counts would be multiplied with the specified weights as shown below –

Inputs

10 Simple	X 2 = 20
14 Average	X 4 = 56
3 Complex	X 6 = 18

Outputs

12 Simple X 3 = 36
11 Average X 5 = 55
5 Complex X 7 = 35

Data Stores

1 Complex X 15 = 15

Processing Inquiries

6 Simple X 2 = 12
4 Average X 4 = 16
3 Complex X 8 = 24

Processing Updates

6 Average X 8 = 48
1 Complex X 12 = 12

External Interfaces

1 Average X 6 = 6

Unadjusted Function Points = 353

There are 14 factors that affect the size of the project effort, and each is ranked from “0”- no influence to “5”- essential.

1.	Data communications	3
2.	Distributed data processing	3
3.	Performance	3
4.	Heavily used configuration	1
5.	Transaction rate	1

6.	On-Line data entry	1
7.	End-user efficiency	4
8.	On-Line update	1
9.	Complex processing	1
10.	Reusability	3
11.	Installation ease	1
12.	Operational ease	3
13.	Multiple sites	2
14.	Facilitate Change	2

According to the above table, our Adjustment Influence (AI) comes out to be = $3+3+3+1+1+1+4+1+1+3+1+3+2+2 = 29$

Using the above mentioned AI, we calculate the Complexity Adjustment Factor (CAF) as

$$\text{CAF} = 0.65 + 0.01 \times \text{AI} = 0.65 + 0.01 \times 29 = 0.94$$

Now, the Adjusted FP is calculated as –

$$\text{Adj-FP} = \text{Unadj-FP} \times \text{CAF} = 353 \times 0.94 = \sim 332$$

As previously measured, software professionals in our organization perform at an average of 10 function points per month. Then –
 $332 \text{ Adj-FP divided by } 10 = \sim 33 \text{ person-months}$

If the average software professional is paid Rs 2L per month (including benefits and overheads), then the personnel cost of the project will be . . .

$$33 \text{ person-months} \times \text{Rs } 2\text{L} = \text{Rs } 66\text{L}$$

Reasons & Assumptions –

1. Error Messages, simple Acknowledgements, Home Page displays, etc. are assumed to be Simple Outputs
2. Accessing software, Selecting input from dropdown, etc. are assumed to be Simple Inputs.
3. Anything which is related to the Curriculum database directly or indirectly is considered to be a complex action.
4. Other actions which cannot be grouped under simple actions are assigned as 'average'.
5. There's only 1 Data Store which holds all the Curriculum Data details and hence comes under Complex DS.
6. There's only 1 External Interface we would be using i.e. E-mail services which would be used rarely and only by HoD's, DoAA or Director.