

Function Point Estimation

Functionality	Inputs	Outputs	Queries	Files	Program Interfaces
Data Retrieval	1	7	4	0	0
Data Storage	4	5	2	1	0
Data Display	3	8	1	2	0
User Interface	8	8	1	1	1

	Complexity				
Description	Total #	Low	Medium	High	Total
Inputs	16	7*3	6*4	3*6	63
Outputs	28	15*4	10*5	3*7	131
Queries	8	5*7	2*10	1*15	70
Files	4	3*7	1*10	0*15	31
Program Interfaces	1	0*5	1*7	0*10	7
Total Unadjusted Function Points (TUFPP)					302

Low	Medium	High
*3	*4	*6
*4	*5	*7
*7	*10	*15
*7	*10	*15
*5	*7	*10

The total processing complexity (PC):

Complexity is from 0 to 3: (0=no effect on project complexity; 3=great effect on project complexity)

Task	Complexity (0-3)
Data Communications	3
Performance	1
End-use Efficiency	3
Reusability	0
Operational Ease	2
Distributed Functions	1
Extensibility	1
Online Data Entry	1
Total Processing Complexity (PC)	12

The adjusted processing complexity (APC):

$$APC = 0.65 + (0.01 * TPC)$$

$$APC = 0.65 + (0.01 * 12) = 0.77$$

The total adjusted function points (TAFP):

$$TAFP = TUFP * APC$$

$$TAFP = 302 * 0.77 = 232.54$$

Converting Function Points to Line Of Code (LOC):

Language/Tool	Number of LOC/FP
HTML	34
Python	24
SQL	21

40% will be done in Python

40% will be done in SQL

20% will be done in HTML

Number of lines of code (LOC) = TAFP * # of (LOC/FP) * %

$$\text{For Python} = (232.54) * (24) * (40/100) = 2232.384 \text{ LOC}$$

$$\text{For SQL} = (232.54) * (21) * (40/100) = 1953.336 \text{ LOC}$$

$$\text{For HTML} = (232.54) * (34) * (20/100) = 1581.272 \text{ LOC}$$

$$\text{So the total LOC} = 5766.992 \text{ LOC}$$

Estimating the effort:

$$\text{Effort} = 2.4 * \text{LOC} / 1000$$

$$= 2.4 * 5766.992 / 1000$$

$$= 13.84 \text{ person month}$$

Estimating the schedule time:

$$\text{Time} = 2.5 * (\text{effort})^{0.38}$$

$$= 2.5 * (13.84)^{0.38}$$

$$= 6.79 \text{ months}$$

Estimating the number of persons:

$$\text{average of \# of persons} = \text{effort} / \text{time}$$

$$= 13.84 / 6.79$$

$$= 2.04 \text{ persons}$$