

# System Size

## Function Point Analysis

Function ality	Input	Output	Queries	File	Program Interface
Data Visualiza tion	4	1	1	1	0
Sign Up	4	0	0	0	0
Recomm endation s	1	1	0	0	0
Login	2	0	1	1	0
Informat ion Retrieval	1	1	1	3	0

	Complexity				
Descripti on	Total#	Low	Medium	High	Total
Inputs	12	7* <u>3</u>	2* <u>4</u>	3* <u>6</u>	47
Outputs	3	1* <u>4</u>	0* <u>5</u>	2* <u>7</u>	18
Queries	3	0* <u>7</u>	3* <u>10</u>	0* <u>15</u>	30
Files	5	0* <u>7</u>	5* <u>10</u>	0* <u>15</u>	50

Program Interface	0	0* <u>5</u>	0* <u>7</u>	0* <u>10</u>	0
Total Unadjusted Function Point (TUF <sub>P</sub> )					145

**The total processing complexity (PC):-**

<b><u>Tasks</u></b>	<b><u>Complexity</u></b>
Data communications	2
Heavily used configuration	0
Transaction rate	2
End-user efficiency	3
Complex processing	1
Installation ease	1
Multiple sites	2
Performance	1
Distributed Data processing	1
Online Data entry	4
Online Updating	4
Reusability	4
Operational ease	3
Extensibility (Facilitate change)	2
Total Processing Complexity (TPC) =	30

**The adjusted processing complexity (APC):-**

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

$$APC = 0.65 + (0.01 * 30) = 0.95$$

**The total adjusted function points (TAFP):-**

$$TAFP = TUFP * APC$$

$$TAFP = 145 * 0.95 = 137.75$$

**Converting Function Points to Line Of Code (LOC):-**

Language/Tool	Number of LOC/FP
HTML	80
Javascript	100

- 60% will be done in Javascript
- 40% will be done in HTML

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

$$\text{For HTML} = (137.75) * (60) * (80/100) = 6612 \text{ LOC}$$

$$\text{For Javascript} = (137.75) * (40) * (100/100) = 5510 \text{ LOC}$$

$$\text{So the total LOC} = 12122 \text{ LOC}$$

**Estimating the effort:-**

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

$$= 2.4 * 12122 / 1000$$

$$= 29.09 \text{ person month}$$

**Estimating the schedule time:-**

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

$$= 2.5 * (29.09)^{0.38}$$
$$= 8.99 \text{ months}$$

**Estimating the number of persons:-**

$$\begin{aligned} \text{Average of \# of persons} &= \text{effort/time} \\ &= 29.09 / 8.99 \\ &= 3.24 \text{ persons} \end{aligned}$$