Estimation Effort Using Function Point Analysis

For

Newspaper Billing System

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1. Computing Unadjusted Function Points

Information Domain Values	Count	Weighting Factors			
		Simple	Average	Complex	
External Inputs (EIs)	**2 x**	**3**	9	2	**6**
External Outputs (EOs)	**1 x**	**4**	3	2	**4**
External Inquiries (EQs)	**1 x**	**1**	2	2	**2**
Internal Logical Files (ILFs)	**1 x**	**2**	1	1	**2**
External Interface Files (EIFs)	**0 x**	**0**	0	0	**0**
Count total →					**= 14**

Table [1.1]

2. Compute Value Adjustment Factor (VAF) :

Sr.	Question	Score					
1	Does the system require reliable backup and recovery?	0	**1**	2	3	4	5
2	Are specialized data communications required to transfer information to or from the application?	0	**1**	2	3	4	5
3	Are there distributed processing functions?	**0**	1	2	3	4	5
4	Is performance critical?	0	1	2	3	**4**	5
5	Will the system run in an existing, heavily utilized operational environment?	0	1	2	**3**	4	5
6	Does the system require online data entry?	**0**	1	2	3	4	5
7	Does the online data entry require the input transaction to be built over multiple screens or operations?	**0**	1	2	3	4	5
8	Are the ILFs updated online?	**0**	1	2	3	4	5
9	Are the inputs, outputs, files, or inquiries complex?	0	1	**2**	3	4	5
10	Is the internal processing complex?	0	1	**2**	3	4	5
11	Is the code designed to be reusable?	0	**1**	2	3	4	5
12	Are conversion and installation included in the design?	0	1	2	3	**4**	5
13	Is the system designed for multiple installations in different organizations?	0	1	2	3	**4**	5
14	Is the application designed to facilitate change and ease of use by the user?	**0**	1	2	3	4	5
	Total	**22**					

Table 2.1[1]

***Score** : 0 (not important or applicable) to 5 (absolutely essential).*

TDI = $\sum^{14}$ Degrees of Influence = 22

3. Calculate the Final Function Point :

Final Function Points = unadjusted points x VAF [2]

= unadjusted points x (0.65 + 0.01 x TDI)

= 14 * x (0.65+0.01*22)

= 12.18

4. Effort Estimation :

Efforts Required for technology	
*Java**	*14(simples)*

Table 4.1 [3]

Effort Estimation

= 12.18 * 14

= 170 Hours

5. References :

[1] Software Engineering A Practitioners Approach, 7th Edition by Roger S. Pressman (z-lib.org)

[2] https://www.tutorialspoint.com

[3] https://www.qsm.com/resources/function-point-languages-table