

Q. Given data for web based social networking site developed by RBN software developers:

Numbers of user Inputs: 97

Number of user output: 52

Number of User Inquiries: 48

Number of External interfaces: 30

Number of logical files: 60

Assuming that the complexity of the Given website development is average, compute the function point. If the productivity of the RBN s/w Developers is 32 FP/p-m, and the salary structure is RS 1300 per months on average, estimate total cost of the software.

Solution

here,

| information domain value | count | Weighting factor | Fp count |
|-------------------------------|-------|------------------|----------|
| Number of user inputs | 97 | 4 | = 388 |
| Number of user outputs | 52 | 5 | = 260 |
| Number of user inquiries | 48 | 4 | = 192 |
| Number of external interfaces | 30 | 17 | = 510 |
| Number of logical files | 60 | 10 | = 600 |

Raw F.p (count total) \longrightarrow 1650

Now,

we know,

$$F.p = \text{Raw F.p} \times \left[0.65 + (0.01 \times \sum F_i) \right]$$

CAV

From question the complexity of the given website is average so,

$$CAV = 14 \times 3 = 42$$

$$\therefore F.p = 1650 \times [0.65 + (0.01 \times 42)]$$

$$= 1650 \times [0.65 + 0.42]$$

$$= 1765.5$$

$$\approx 1766 \text{ Ave.}$$

From question,

$$\text{productivity} = 32 \text{ Fp/p-M}$$

$$\text{salary} = \text{Rs } 13000 \text{ per month on average}$$

Now,

$$\text{Effort} = \text{Function point (Fp)} / \text{Average productivity}$$

$$= 1765.5 \approx 1766 / 32$$

$$= 55.18 \text{ p-M}$$

$$\text{total project cost} = \text{Fp} \times (\text{Labor rate} / \text{Average productivity})$$

$$= 1766 \times (\text{Rs } 3000 / 32)$$

$$= \text{Rs } 177450 = \text{Rs } 717457.5$$

$$\text{Est. count} = \frac{S_{opt} + 4S_m + S_{pess}}{6}$$

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| Information domain value | optimistic | likely | pessimistic | Est. count | Weight | Expected |
|----------------------------|------------|--------|-------------|------------|--------|----------|
| no. Input | 20 | 24 | 30 | 24 | 4 | 96 |
| no. output | 12 | 15 | 22 | 16 | 5 | 80 |
| no. inquiries | 16 | 22 | 28 | 22 | 4 | 88 |
| no. of files | 4 | 4 | 5 | 4 | 10 | 40 |
| no. of external interfaces | 2 | 2 | 3 | 2 | 7 | 14 |
| count total | | | | | | 318 |

Now,

$$E.p = 318 \times [0.65 + 0.01 \times 42]$$

$$= 340.36$$

$$\approx 340$$