Assignment 1

Q- WAP to implement FPA method

In a system, total no. for each type FP is given as:

i/p->60, file->25, query->35, i/f->20, o/p->25.The types of FP are simple, avg., complex.

The no. ratio for each FP is like: i/p=1:6:3, file=1:2:2, query= avg., i/f= complex, o/p=2:2:1.

The wt. factors for FP are resp. 0.5, 1.0, 1.5 for simple, avg. and complex types.

The reliability and complexity of the system are 65% and 0.75 resp. Compute FPA for the

above system (UFP, TDI, VAF, AFP).

Ans-

To implement the Function Point Analysis (FPA) method, we'll follow the steps to calculate Unadjusted Function Point (UFP), Technical Complexity Factor (TDI), Value Adjustment Factor (VAF), and Adjusted Function Point (AFP).

First, we need to calculate the Unadjusted Function Point (UFP) using the counts and the type-specific weights provided:

Total Number of each type of FP:

- i/p - 60
- file - 25
- query - 35
- i/f - 20
- o/p - 25

Type-specific weights:

- i/p = 1:6:3
- file = 1:2:2
- query = avg.
- i/f = complex
- o/p = 2:2:1

Weight Factors:

- Simple = 0.5
- Average = 1.0
- Complex = 1.5

Reliability (R) = 65% (0.65)

Technical Complexity Factor (TCF) = 0.75

Now, let's calculate the Unadjusted Function Point (UFP):

UFP = (Count of i/p * Weight for i/p) + (Count of file * Weight for file) + (Count of query * Weight for query) + (Count of i/f * Weight for i/f) + (Count of o/p * Weight for o/p)

Let's start by calculating the Unadjusted Function Point (UFP):

UFP = (60 * (1*0.5 + 6*1.0 + 3*1.5)) + (25 * (1*0.5 + 2*1.0 + 2*1.5)) + (35 * 1.0) + (20 * 1.5) + (25 * (2*0.5 + 2*1.0 + 1*1.5))

Once we have UFP, we can calculate the Technical Complexity Factor (TCF):

TCF = 0.65 + (0.01 * Sum of general complexity attributes)

Next, we'll calculate the Value Adjustment Factor (VAF):

VAF = 0.65 + (0.01 * Sum of general complexity attributes)

Finally, we can compute the Adjusted Function Point (AFP):

AFP = UFP * TCF * VAF

Let's calculate these values and find the FPA for the given system.I see a calculation error in the values provided. Let me recalculate the Function Point Analysis (FPA) for the given system based on the provided information.

First, let's calculate the Unadjusted Function Points (UFP) using the counts and weights provided:

- i/p (input): 60 * 1 * 0.5 = 30

- file (file): 25 * 2 * 1.0 = 50

- query (query): 35 * 1.0 (for average type) = 35

- i/f (interface): 20 * 1.5 (for complex type) = 30

- o/p (output): 25 * 2 * 1.0 = 50

- Total UFP (Sum of the above):195

Now, let's calculate the Technical Complexity Factor (TCF) and the Value Adjustment Factor (VAF) using the given reliability and complexity:

- TCF (Technical Complexity Factor): 0.75

- VAF (Value Adjustment Factor): 94%

Now, we can calculate the Adjusted Function Points (AFP):

- **AFP (Adjusted Function Points):** UFP * TCF * VAF

- AFP = 195 * 0.75 * 0.94 = 131.775

Therefore, the calculated Function Point Analysis (FPA) for the given system is as follows:

- **UFP** (Unadjusted Function Points): 195

- **TCF** (Technical Complexity Factor): 0.75

- **VAF** (Value Adjustment Factor): 94%

- **AFP** (Adjusted Function Points): 131.775