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SPPQM Assignment

Assignment on Function Points:-

Q1. Calculate Unadjusted Function Point (UPF)
Complexity Adjustment factor (CAF)
Function Point (FP)

Sol^n

Given:- Number of User Inputs = 32
Number of User Outputs = 60
Number of user inquiries = 24
Number of files = 8
Number of external interfaces = 2

formula:- $UFP = \Sigma(\text{number of elements of given type}) \times weight$
$CAF = 0.65 + (0.01 + TDI)$
$FP = (UFP \times CAF)$

Working:- Average Weights:-
User Input = 4
User output = 5
External user inquiries = 4
Internal files = 10
External interfaces = 7

$UFP = (32 \times 4 + 60 \times 5 + 24 \times 4 + 8 \times 10 + 2 \times 7)$

$= 128 + 300 + 96 + 80 + 14$

$\boxed{UFP = 618}$

CAF :- TDI = Total degree of influence
$= 14 \times 3$
$= 42$
$CAF = 0.65 + (0.01 \times 42)$
$= 0.65 + 0.42$
$\boxed{CAF = 1.07}$

Function Point $FP = UFP \times CAF$
$= 618 \times 1.07$
$\boxed{FP = 661.26}$

Question No-02

Solution :- No. of user inputs = 024
           No. of user outputs = 016
           No. of user enquiries = 22
           No. of internal files = 4
           No. of external files = 2

Average weights

$UI = 4$
$EO = 5$
$EQ = 4$
$ILF = 10$
$EIF = 7$

$$UFP = 24 \times 4 + 16 \times 5 + 22 \times 4 + 4 \times 10 + 2 \times 7$$
$$= 96 + 80 + 88 + 40 + 14$$

$$\boxed{UFP = 318}$$

$$CAF = [4, 2, 0, 4, 3, 4, 5, 3, 5, 5, 4, 3, 5, 5]$$
$$\Rightarrow CAF = 0.65 + (0.01 \times \text{Sum of Complexity AV})$$
$$= 0.65 + (0.01 \times 52)$$
$$= 0.65 + 0.52$$

$$\boxed{CAF = 1.17}$$

$$FP = UFP \times CAF$$
$$= 318 \times 1.17$$

$$\boxed{FP = 372.06}$$

Question No-03

Sol^n

    Given :- Number of user inputs = 24
              Number of user output = 46
              Number of user inquiries = 8
              Number of files = 4
              Number of external interfaces = 2

    Formula :- $UFP = \Sigma(\text{sum of elements of given type}) \times \text{weight}$

    Working :- Weights :-
              UI (average) = 4
              EO (simple) = 4
              EQ (complex) = 6
              ILF (average) = 10
              EIF (simple) = 5

$$UFP = 24 \times 4 + 46 \times 4 + 8 \times 6 + 4 \times 10 + 2 \times 5$$
$$= 96 + 184 + 48 + 40 + 10$$

$$\boxed{UFP = 378}$$

CAF = 0·65 + (0·01 × Sum of Complexity Adjustment values)

$$= 0.65 + (0·01 \times 43)$$

$$= 0·65 + 0·43$$

$$\boxed{CAF \Rightarrow 1·08}$$

function Points $\Rightarrow$ FP = UFP $\times$ CAF

$$\Rightarrow 378 \times 1·08$$

$$\boxed{FP = 408·24}$$

Question No-04

Solution:- Given:- Number of External inputs = 04

Number of external output = 4
Number of external inquiries = 03
Number of files = 0
Number of logical files = 4

Working:- Low Complexity:-

EI = 3

EO = 4

EQ = 3

ILF = 7

EIF = 5

$$UFP = 3 \times 4 + 4 \times 4 + 3 \times 3 + 7 \times 0 + 5 \times 4$$

$$= 12 + 16 + 9 + 20$$

$$\boxed{UFP = 57}$$

CAF = 0·65 + (0·01 × TDI)

$$= 0·65 + (0·01 \times 42)$$

$$\boxed{CAF = 1·07}$$

Function Point = UFP × CAF
= 57×1·07

$$\boxed{FP = 60.99}$$

Question No - 05

Solution :-

Given :- No. of user input = 22
No. of user output = 15
No. of user inquiries = 26
No. of files = 46
No. of external interfaces = 2

formula :- UFP = Σ (number of elements of given type) × weight

CAF = 0·65 (0·01 + TDI)

FP = UFP × CAF

Working :- Average Weights :-
EI = 4
EO = 5
EQ = 4
ILF = 10
EIF = 7

UFP = 22×4 + 15×5 + 26×4 + 46×10 + 2×7

= 88 + 75 + 104 + 460 + 14

$$\boxed{UFP = 741}$$

CAF :- TDI = Sum of all CAV
= 3+1+1+3+2+3+4+2+4+4+3+2+4+4
= 40

= CAF = 0·65 + (0·01 × 40)
= 0·65 + 0·4

$$\boxed{CAF = 1·05}$$

Function Point FP = 1·05 × 741

$$\boxed{FP = 778·05}$$

Solution :-

Number of user inputs = 33

$$EO = 3$$
$$EQ = 0$$
$$ILF = 2$$
$$EIF = 0$$

Weights are simple :-

$$EI = 3$$
$$EO = 4$$
$$EQ = 3$$
$$ILF = 7$$
$$EIF = 5$$

$$UFP = 33 \times 3 + 3 \times 4 + 0 \times 3 + 2 \times 7 + 0 \times 5$$
$$= 99 + 12 + 0 + 14$$
$$= 111 + 14$$

$$\boxed{UFP = 125}$$

$$CAF = 0.65 + (0.01 \times TDI)$$
$$= 0.65 + (0.01 \times 17)$$
$$0.65 + 0.17$$

$$\boxed{CAF = 0.82}$$

function Points $FP = 125 \times 0.82$

$$\boxed{FP = 102.5}$$