**Function point analysis**

**Aim**: To calculate effort using FP oriented estimation model for library management system.

**Function point analysis:**

Function point analysis is a method on set of rules to measure the amount of software functionalities and software size of the developed product. To overcome the limitations of LOC based measurement, FP analysis is used. FP based estimations are based on the five information domains which are as follows.

1. Number of inputs
2. Number of outputs
3. Number of inquiries
4. Number of internal logic files
5. Number of external interfaces.

The values of these five domains are categorised as simple, average and complex.

|  |  |  |  |
| --- | --- | --- | --- |
| Information domain | simple | average | complex |
| Number of inputs | 4 | 5 | 6 |
| Number of outputs | 4 | 6 | 7 |
| Number of inquiries | 3 | 4 | 6 |
| Number of internal logic files | 6 | 7 | 10 |
| Number of external interfaces | 5 | 7 | 12 |

The steps involved in the calculation of FP estimation are

1. Calculate the unadjusted function point(UFP).
2. Calculate the complexity adjustment attributes(CAA).
3. Calculate FP using FP=UFP\*CAA.

The domain values are assumed as follows.

Number of inputs = 13

Number of outputs = 4

Number of inquiries = 4

Number of internal logic files = 3

Number of external interfaces = 2

The total value of complexity adjustment attributes is 11.

1. Consider the LMS to be an average complexity project.
2. UFP= (number of inputs) \*4+(number of outputs)\*5+(number of inquiries)\*4+(number of internal logical files)\*10+(number of external interfaces)\*7

=13\*5+4\*6+4\*4+3\*7+2\*7

=140

UFP=140

3.CAA=0.65+0.01\*11\*3

=0.98

4.FP= UFP\*CAA

=140\*0.98

=137.2