FUNCTIONAL POINT ANALYSIS

Some Input Examples:

1. **Simple:**
    a. Registered User enters login name and password.
    b. Registered User create a Group.
    c. Registered User and Repository Manager view its personal details.
    d. Registered user selects <My Document> option.
    e. User selects Header options to view particular type of documents.
    f. Registered User selects <My Group> option.
2. **Average:**
    a. User enters the Registration Details.
    b. Repository Manager approves/reject Document.
    c. Any User Download a document.
    d. User searches for Profile or a Document.
3. **Complex:**
    a. Registered User Upload a document.
    b. Registered User and Repository Manager modify personal details.
    c. Registered User delete a group.
    d. Registered User add members to a Group.
    e. Registered User modify Document Details.

Some Output Examples:

1. **Simple:**
    a. Software displays home page of user when successfully logged in.
    b. Software display ACK of Successful Registration.
    c. Software display Alert Box when Registered User try to add member without creating group.
    d. Software displays create group.
    e. Software display Alert Box for wrong username and Password.
2. **Average:**

a. Software displays the Registration From.
b. Software displays Upload page problem.
c. Software displays The Document of Registered User.
d. Software displays the list of groups belong to Registered User.
e. Software displays list of registered members to be added in a group.
f. Software displays list of groups belonging to user.

3. **Complex:**
   a. Software displays a document which is in its range of visibility.
   b. Software displays select option pop-up menu to download document.
   c. Software displays list of documents when searched.

Data Stores:

1. **Average:**
   a. Uploaded Document.
   b. Group Members.
   c. Group Document.
2. **Complex:**
   a. Document Details.
   b. User Profile Details.
   c. Group Details.

Some Processing Inquires:

1. **Simple:**
   a. Software inquires if the user is valid or not.
   b. Software inquires if the user is guest user or not.
2. **Average:**
   a. Software validates all Registration Fields.
   b. Software inquires to fetch Personal Details form.
   c. Software inquires to fetch Document Details from.

d. Software inquires to fetch Add/Delete group form.
e. Software inquires to fetch validate document form.

3. **Complex:**
   a. Software authenticates user id and password.
   b. Software inquires for the list of groups belongs to the particular user.
   c. Software inquires for the list of document belonging to the particular user.

Some Processing Updates:

1. **Simple:**
   a. Software send request for approval of the document.
2. **Average:**
   a. Software saves uploaded document.
   b. Software saves group member details.

3. **Complex:**
   a. Software saves personal details of user.
   b. Software saves document details.
   c. Software saves details of Groups.

Overall the Functional Point Counts			
Cases	**Simple**	**Average**	**Complex**
Inputs	43	6	5
Outputs	25	15	5
Data Stores	0	3	3
Processing Inquires	3	9	3
Processing Updates	3	3	4
External Interfaces	0	1	0

The Weight of Functional Point			
Cases	**Simple**	**Average**	**Complex**
Inputs	1	5	7
Outputs	1	5	9
Data Stores	2	4	10
Processing Inquires	3	5	7
Processing Updates	3	6	10
External Interfaces	1	2	3

The Functional Points are multiplied with their corresponding weights:	
Inputs	**Processing Inquires**
43 Simple X 1 = 40 6 Average X 5 = 30 5 Complex X 7 = 35	3 Simple X 3 = 9 9 Average x 5 = 45 3 Complex X 7 = 21
Outputs	**Processing Updates**
25 Simple X 1 = 25 15 Average X 5 = 75 5 Complex X 9 = 45	3 Simple X 3 = 9 3 Average X 6 = 18 4 Complex X 10 = 40
Data Stores	**External Interfaces**
0 Simple X 2 = 0 3 Average X 4 = 12 3 Complex X 10 = 30	0 Simple X 1 = 0 1 Average X 2 = 2 0 Complex X 3 = 0
Unadjsuted Function Points (Unadj-FP) = 345	

In addition to these weighted functional points,

There are Several factors that affect the size of project effort:

1. **The system require reliable backup and recovery. -> 7**

The data and control information used in the application are sent or received

over communication facilities.

2. **Is performance critical? -> 3**

Application performance objectives, stated or approved by the user, in either response or throughput, influence (or will influence) the design, development, installation and support of the application**.**

3. **Will the system run in an existing heavily utilized operational environment? -> 1**

   A heavily used operational configuration, requiring special design considerations, is a characteristic of the application.

4. **Are the master files updated on line? -> 5**

   The application provides on-line update for the internal logical files.

5. **Is the inputs, outputs, files, or inquiries complex? -> 2**

   Complex processing is a characteristic of the application.

6. **Is the internal processing complex? -> 5**

7. **Is the application designed to facilitate change and ease of use by the user? -> 4**

   The application has been specifically designed, developed and supported to facilitate change.

8. **Are the conversion and installation included in the design? -> 4**

   Conversion and installation ease are characteristics of the application. A conversion and installation plan and/or conversion tools were provided and tested during the system test phase.

The Artificial Influence thus calculated = 50.

Using the above mentioned adjustment influence,

We calculate the Complexity-Adjustment-Factor (CAF) as:
CAF = 0.65 + 0.01 * AI
Where AI = 50
CAF = 1.15

Using, CAF, Adjusted Functional Point (Adj- FP) is calculated as:

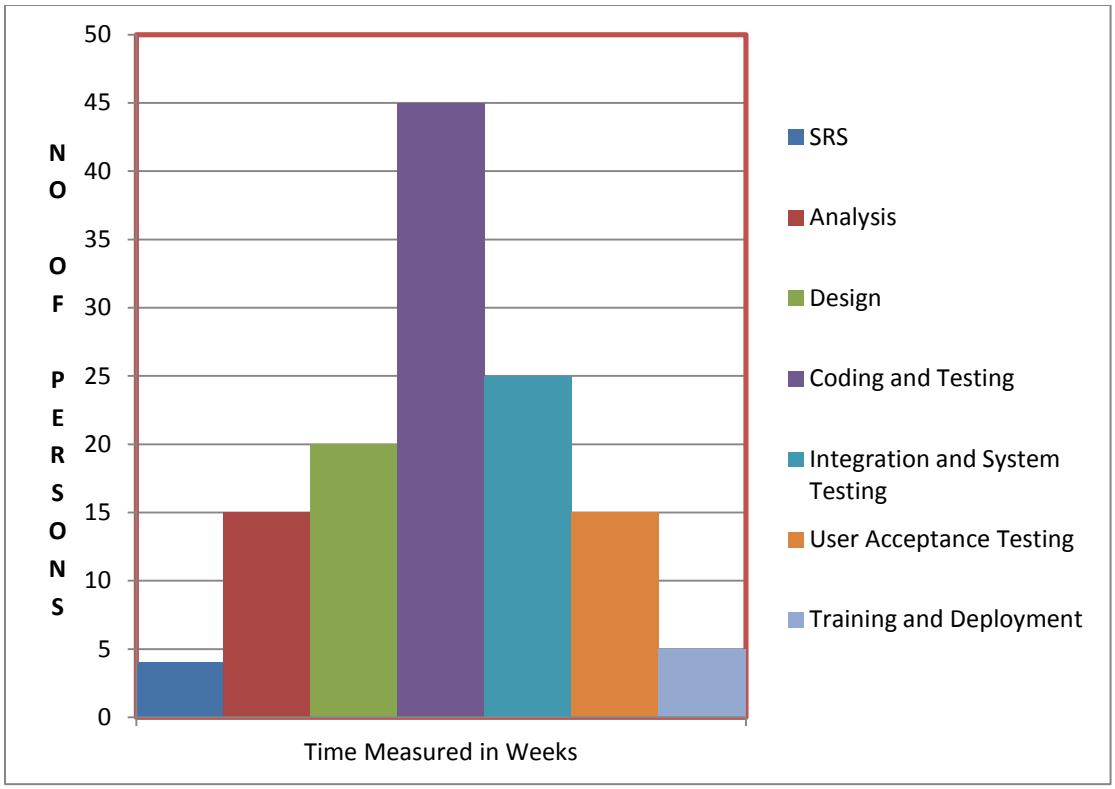
Adj-FP = Unadj-FP * CAF = 345 * 1.15 = 396.75 = ~ 397

Software professionals in our organization perform at an average of 10 function points per month. Thus ,

397 Adj-FP divided by 10 = ~40 person-months

If the average software professional is paid Rs 2L per month (including benefits
and overheads), then
The personal cost of the project will be
40 person-months X Rs 3L = Rs 120L

Effort Estimation		
SRS	**4%**	**4**
Analysis	**15%**	**15**
Design	**20%**	**20**
Coding and Testing	**45%**	**45**
Integration and System Testing	**25%**	**25**
User Acceptance Testing	**15%**	**15**
Training and Deployment	**5%**	**5**


50
45
40
35
30
25
20
15
10
5
0
NO OF PERSONS
Time Measured in Weeks
SRS
Analysis
Design
Coding and Testing
Integration and System Testing
User Acceptance Testing
Training and Deployment