

Group members:

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Estimation Report

Size Estimation (Function Point Metrics):

Step 1: Estimating the variables and Calculating UFP for the FP Metric of size estimation

Inputs- 4

1. Users' details (average)
2. Search user(simple)
3. Post(complex)
4. Complaints (average)

Outputs-2

1. Profile details(average)
2. Users' list (simple)

Inquiries-4

1. Friend list(simple)
2. Faculty list(simple)
3. Placement information(simple)
4. Complaints (complex)

Files-3

1. User details(average)
2. Faculty list(simple)
3. Alumni list(simple)

Interface-1

1. College social network web API for main page(complex)

$$UFP = 4*4 + 2*5 + 4*4 + 3*10 + 1*10 = 82$$

Step 2: Calculating the Refined UFP based on the complexities of all the variables:

	simple	average	complex
input	1	2	1
output	1	1	0
inquiries	3	0	1
Files	2	1	0
interface	0	0	1

$$\text{Refined UFP} = 1*3 + 2*4 + 1*6 + 1*4 + 1*5 + 3*3 + 1*6 + 2*7 + 1*10 + 1*10$$

$$\text{Refined UFP} = 75$$

Step 3: Calculating DI, TCF and FP

$$\text{Average DI} = 14 * \text{scale}$$

$$\text{Scale} = 4 \text{ (complexity adjustment factor = significant (4))}$$

$$\text{Then Average DI} = 14 * 4 = 56$$

$$\text{TCF} = 0.65 + 0.01 * \text{DI}$$

$$= 0.65 + 0.01 * 56$$

$$= 1.21$$

$$\text{FP} = \text{UFP} * \text{TCF}$$

$$= 75 * 1.21$$

$$= 90.75$$

Effort and Development Time Estimation:

LOC estimation:

1. Registration: 300

2. Login: 150

3. Home Page: 600

4. student/user Details: 350

5. College alerts: 520

6. Miscellaneous: 600

Therefore, LOC is approximately 2520. So, KLOC= 2.52

Semi-Detached Project

$$\text{Effort} = 3 * (\text{KLOC}^{1.12}) \text{ PM}$$

$$= 3 * (2.52^{1.12}) \text{ PM}$$

$$\text{Effort} = 8.4467 \text{ PM}$$

$$\text{Tdev} = 2.5 * (\text{Effort})^{0.35} \text{ Months}$$

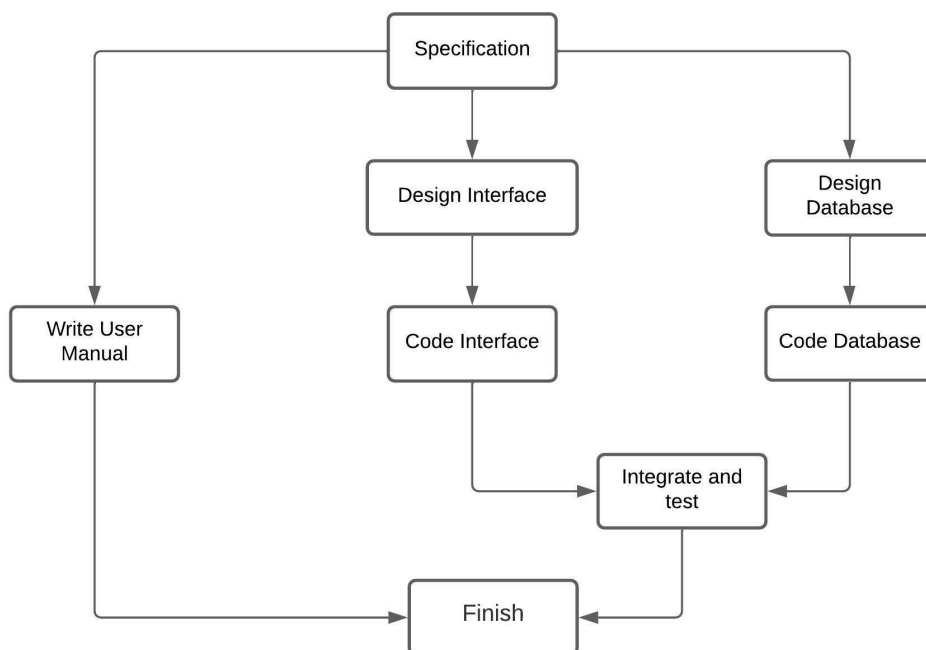
= 2.5 *(8.4467)^0.35 Months

Tdev = 5.275 Months

Project schedule breakdown (Activity network and PERT chart):

Task No.	Task	Duration	Dependency
1	Specification	10	
2	Design Database	30	1
3	Design Interface	35	1
4	Code Database	45	2
5	Code Interface	40	3
6	Integrate and test	70	4&5
7	Write User Manual	30	1

Activity Network:



Projected Parameters Computed from Activity Network:

Task	Early Finish	Early Finish	Latest Start	Latest Finish	Slack
Specification	0	10	0	10	0
Design Database	10	45	15	50	5
Design Interface	10	45	10	45	0
Code Database	45	95	50	100	5
Code Interface	45	85	45	85	0
Integrate and test	95	165	100	170	0
Write User Manual	10	40	45	75	0

PERT Chart:

- Blue denotes the critical path.

