INTERMEDIATE COCOMO - BASED ESTIMATION FOR RESOURE.CS

function Points Of Project:

As from previous document of identifying fp-

function points = 50

Convert fp to kloc:

As we are working on JavaScript, so the standard for this is 47

KLOC = 50 x 47 = 2.35 KLOC

- **MODE:**

Semi-Detached

→ features: Features are more than Average.

→ Team: In-Expeciance, just have skillset and knowledge.

so, the project is classfied as Semi-Detached due to its moderate complexity and mixed team Experience.

COCOMO Cost Drivers And Multipliers

Category	Cost Driver	Rating	Multiplier
Product Attributes	RELY	high	1.15
	DATA	Nominal	1.00
	CPLX	V. high	1.65
Hardware Attributes	TIME	high	1.11
	STORE	high	1.05
	VIRT	Nominal	1.00
	TURN	Nominal	1.00
Personnal Attributes	ACAP	high	0.85
	PCAP	Nominal	1.00
	AEXP	Nominal	1.00
	VEXP	Nominal	1.00
	LEXP	Nominal	1.00

Project Attributes	MODP	High	0.91
	TOOL	High	0.91
	SCED	Nominal	1.00

$\boxed{EAF = 1.5}$ & $\boxed{\text{Size} = 2.35 \text{ KLOC}}$

So, Our project is Semi-Detached ∴ Therefore Constants are:

$a = 3.0$, $b = 1.12$

$c = 2.5$, $d = 0.35$

1. Effort Estimation:

$$\because \text{Effort} = a \times (\text{KLOC})^b \times EAF$$
$$= 3 \times (2.35)^{1.12} \times 1.5$$
$$\approx \boxed{11.51 \text{ PM}}$$

2. Duration:

$$\because \text{Duration} = c \times (\text{Effort})^d$$
$$= 2.5 \times (11.51)^{0.35}$$
$$\approx \boxed{5.8 \text{ Months}}$$

3. Staffing:

$$\text{Staffing} = \frac{11.51}{5.8} \approx \boxed{2 \text{ persons}}$$

So,

⊙ KLOC = 2.35 ⊙ EAF = 1.5 ⊙ Effort 11.51 PM

⊙ Duration = 5.8M ⊙ Size 2 persons.

SCEDULING:

Phase	% of Effort	Duration	Description
Req. & planing	10%	0.60	Define scope, gather req.
Design	20%	1.19	UI/UX, Schema
Coding	40%	2.38	MERSTACT dev, backend, API, frontend logic
Testing	20%	1.19	Unit testing, Integration testing, bug fixing
Deploy. & Documentation	10%	0.60	final deploy, user manual, project report