

Cost Estimated Project using Three point approach
RPL NotePad

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Iteration 1 13 Oct 23 - Oct 27 ...										
1	ui/x login	andinapashaa	Done	P0	UI/UX	Iteration 1	Oct 28, 2025	1	S	
2	ui/x register	andinapashaa	Done	P0	UI/UX	Iteration 1	Oct 28, 2025	1	S	
3	ui/x dashboard(mahasiswa)	andinapashaa	Done	P0	UI/UX	Iteration 1	Oct 28, 2025	3	L	
4	slicing login	mohizzatulhaqi	Done	P0	Frontend	Iteration 1	Oct 28, 2025	2	M	
5	slicing register	mohizzatulhaqi	Done	P0	Frontend	Iteration 1	Oct 28, 2025	2	M	
6	model data	BeastMaster26 and ...	Done	P0	Backend	Iteration 1	Oct 28, 2025	2	M	
7	setup folder backend	BeastMaster26	Done	P0	Backend	Iteration 1	Oct 28, 2025	1	S	
8	slicing dasborad(mahasiswa)	mohizzatulhaqi	Done	P1	Frontend	Iteration 1	Oct 28, 2025	4	XL	
9	endpoint login	dhikryaaa	Done	P1	Backend	Iteration 1	Oct 28, 2025	1	S	
10	endpoint register	dhikryaaa	Done	P1	Backend	Iteration 1	Oct 28, 2025	1	S	
11	endpoint crud dasboar(mahasiswa)	BeastMaster26 and ...	Done	P1	Backend	Iteration 1	Oct 28, 2025	2	M	
12	ui/x dashboard(admin)	andinapashaa	Done	P2	UI/UX	Iteration 1	Oct 28, 2025	3	L	
13	endpoint crud dasboard(admin)	BeastMaster26 and ...	Done	P2	Backend	Iteration 1	Oct 28, 2025	2	M	

Iteration 2 14 Oct 28 - Nov 01 ...										
14	Integrasi endpoint diskusi	mohizzatulhaqi	Done	P0	Frontend	Iteration 2	Nov 12, 2025	4	XL	
15	Memperbaiki ui/uix	andinapashaa	Done	P0	UI/UX	Iteration 2	Nov 12, 2025	3	L	
16	API documentation enpoint forum diskusi	BeastMaster26	Done	P0	QA	Iteration 2	Nov 12, 2025	3	L	
17	API dokumentasi menjawab diskusi	BeastMaster26	Done	P0	QA	Iteration 2	Nov 12, 2025	3	L	
18	API dokumentasi endpoint menambah catatan	BeastMaster26	Done	P0	QA	Iteration 2	Nov 12, 2025	3	L	
19	API dokumentasi menambah pdf/gambar	BeastMaster26	Done	P0	QA	Iteration 2	Nov 12, 2025	3	L	
20	ui/x forum diskusi	andinapashaa	Done	P1	UI/UX	Iteration 2	Nov 12, 2025	4	XL	
21	ui/x catatan	andinapashaa	Done	P1	UI/UX	Iteration 2	Nov 12, 2025	4	XL	
22	slicing forum diskusi #1	mohizzatulhaqi	Done	P1	Frontend	Iteration 2	Nov 12, 2025	4	XL	
23	Endpoint isu diskusi/forum	dhikryaaa	Done	P1	Backend	Iteration 2	Nov 12, 2025	3	L	
24	Endpoint menjawab diskusi/forum	dhikryaaa	Done	P1	Backend	Iteration 2	Nov 12, 2025	3	L	
25	slicing dasboard admin	mohizzatulhaqi	Done	P2	Frontend	Iteration 2	Nov 12, 2025	4	XL	
26	migrasi ke postgrees	dhikryaaa	Done	P2	Backend	Iteration 2	Nov 12, 2025	3	L	
27	API Security	dhikryaaa	Done	P2	Backend	Iteration 2	Nov 12, 2025	3	L	

Iteration 3 12 Nov 02 - Nov 06 ...										
28	Slicing Catatan	mohizzatulhaqi	Done	P0	Frontend	Iteration 3	Nov 26, 2025	4	XL	
29	update endpoint create class	dhikryaaa	Done	P0	Backend	Iteration 3	Nov 26, 2025	1	S	
30	page 404	andinapashaa	Done	P1	UI/UX	Iteration 3	Nov 26, 2025	2	M	
31	logo dan loading state	andinapashaa	Done	P1	UI/UX	Iteration 3	Nov 26, 2025	3	L	
32	slicing 404, toast, loading, tidak ada koneksi	mohizzatulhaqi	Done	P1	Frontend	Iteration 3	Nov 26, 2025	4	XL	
33	page tidak ada koneksi	andinapashaa	Done	P1	UI/UX	Iteration 3	Nov 26, 2025	2	M	
34	Endpoint upload teks dan file(catatan)	dhikryaaa	Done	P1	Backend	Iteration 3	Nov 26, 2025	4	XL	
35	enpoint menampilkan catatan	dhikryaaa	Done	P1	Backend	Iteration 3	Nov 26, 2025	3	L	
36	API dokumentasi endpoint upload catatan	BeastMaster26	Done	P1	QA	Iteration 3	Nov 26, 2025	2	M	
37	API dokumentasi endpoint menampilkan catatan	BeastMaster26	Done	P1	QA	Iteration 3	Nov 26, 2025	2	M	
38	toast	andinapashaa	Done	P2	UI/UX	Iteration 3	Nov 26, 2025	1	S	
39	Testing hasil slicing FE	BeastMaster26	Done	P2	QA	Iteration 3	Nov 26, 2025	3	L	

Iteration 4 10 Nov 07 - Nov 11 ...										
40	Buat endpoint search	dhikryaaa	Done	P0	Backend	Iteration 4	Dec 10, 2025	4	XL	
41	Edit endpoint edit catatan	dhikryaaa	Done	P0	Backend	Iteration 4	Dec 10, 2025	2	M	
42	edit endpoint login	dhikryaaa	Done	P0	Backend	Iteration 4	Dec 10, 2025	1	S	
43	Draft Catatan	mohizzatulhaqi	Todo	P1	Frontend	Iteration 4	Dec 10, 2025	1	S	
44	Page catatan bagi admin	andinapashaa	Todo	P1	UI/UX	Iteration 4	Dec 10, 2025	3	L	
45	Page forum bagi admin	andinapashaa and ...	Todo	P1	UI/UX	Iteration 4	Dec 10, 2025	4	XL	
46	slicing page catatan bagi admin	mohizzatulhaqi	Todo	P1	Frontend	Iteration 4	Dec 10, 2025	3	L	
47	slicing page forum bagi admin	mohizzatulhaqi	Todo	P1	Frontend	Iteration 4	Dec 10, 2025	3	L	
48	UI testing automation by Firebase	BeastMaster26	Todo	P1	QA	Iteration 4	Dec 10, 2025	2	M	
49	Testing endpoint search	BeastMaster26	Todo	P1	QA	Iteration 4	Dec 10, 2025	1	S	

Distribusi beta dipakai karena bisa menghasilkan rata-rata yang lebih akurat dengan memberi bobot lebih besar pada estimasi yang paling mungkin terjadi. Cara ini sengaja digunakan agar hasil perhitungannya lebih mendekati pola distribusi normal, yaitu pola kejadian yang sering muncul di dunia nyata. Metode ini digunakan dalam **PERT (Program Evaluation and Review Technique)**, yaitu teknik perencanaan proyek yang memprediksi waktu atau biaya berdasarkan tiga estimasi: optimis, realistis, dan pesimis. Karena mengikuti pola distribusi beta, PERT biasanya memberikan estimasi yang lebih tepat dibandingkan metode tiga titik biasa (triangular), yang hanya mengambil nilai tengah tanpa mempertimbangkan kemungkinan terbesar.

Beta Distribution (PERT):

$$E = (O + 4M + P) / 6$$

Three-Point Estimation menggunakan tiga angka:

1. **O (Optimistic)**
Biaya paling rendah jika semua berjalan sangat lancar.
2. **M (Most Likely)**
Estimasi biaya paling realistis berdasarkan pengalaman.
3. **P (Pessimistic)**
Biaya paling tinggi jika terjadi hambatan.

Dengan biaya yang saya berikan :

Optimistic = 60.000

Most likely = 100.000

Pessimistic = 160.000

Dengan menyesuaikan biaya awal dengan besarnya story point yang ada pada backlog maka, didapat perhitungan seperti berikut:

Iteration	Task	Role	Story Point	A (IDR)	M (IDR)	B (IDR)	E (Expected IDR)	E per SP (IDR)	Total Payment
Iterasi 1	UI/UX login	UI/UX	1	Rp 60,000.00	Rp 100,000.00	Rp 160,000.00	Rp 103,333.00	Rp 103,333.00	
Iterasi 1	UI/UX register	UI/UX	1	Rp 60,000.00	Rp 100,000.00	Rp 160,000.00	Rp 103,333.00	Rp 103,333.00	
Iterasi 1	UI/UX dashboard (mhs)	UI/UX	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00	
Iterasi 1	Slicing login	Frontend	2	Rp 120,000.00	Rp 200,000.00	Rp 320,000.00	Rp 206,667.00	Rp 103,333.00	
Iterasi 1	Slicing register	Frontend	2	Rp 120,000.00	Rp 200,000.00	Rp 320,000.00	Rp 206,667.00	Rp 103,333.00	
Iterasi 1	Model data	Backend	2	Rp 120,000.00	Rp 200,000.00	Rp 320,000.00	Rp 206,667.00	Rp 103,333.00	
Iterasi 1	Setup folder backend	Backend	1	Rp 60,000.00	Rp 100,000.00	Rp 160,000.00	Rp 103,333.00	Rp 103,333.00	
Iterasi 1	Slicing dashboard (mhs)	Frontend	4	Rp 240,000.00	Rp 400,000.00	Rp 640,000.00	Rp 413,333.00	Rp 103,333.00	
Iterasi 1	Endpoint login	Backend	1	Rp 60,000.00	Rp 100,000.00	Rp 160,000.00	Rp 103,333.00	Rp 103,333.00	
Iterasi 1	Endpoint register	Backend	1	Rp 60,000.00	Rp 100,000.00	Rp 160,000.00	Rp 103,333.00	Rp 103,333.00	
Iterasi 1	Endpoint CRUD dashboard (mhs)	Backend	2	Rp 120,000.00	Rp 200,000.00	Rp 320,000.00	Rp 206,667.00	Rp 103,333.00	
Iterasi 1	UI/UX dashboard (admin)	UI/UX	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00	
Iterasi 1	Endpoint CRUD dashboard (admin)	Backend	2	Rp 120,000.00	Rp 200,000.00	Rp 320,000.00	Rp 206,667.00	Rp 103,333.00	

Total Payment Iterasi 1							Rp 2,583,333.00	
	Integrasi endpoint diskusi	Frontend	4	Rp 240,000.00	Rp 400,000.00	Rp 640,000.00	Rp 413,333.00	Rp 103,333.00
Iteration 2	Memperbaiki ui/uix	UI/UX	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00
	API documentation enpoint forum diskusi	QA	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00
Iteration 2	API dokumentasi menjawab diskusi	QA	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00
	API dokumentasi endpoint menambah catatan	QA	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00
Iteration 2	API dokumentasi menambah pdf/gambar	QA	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00
	ui/x forum diskusi	UI/UX	4	Rp 240,000.00	Rp 400,000.00	Rp 640,000.00	Rp 413,333.00	Rp 103,333.00
Iteration 2	ui/x catatan	UI/UX	4	Rp 240,000.00	Rp 400,000.00	Rp 640,000.00	Rp 413,333.00	Rp 103,333.00
	slicing forum diskusi #1	Frontend	4	Rp 240,000.00	Rp 400,000.00	Rp 640,000.00	Rp 413,333.00	Rp 103,333.00
Iteration 2	Endpoint isu diskusi/forum	Backend	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00
	Endpoint menjawab diskusi/forum	Backend	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00
Iteration 2	slicing dashboard admin	Frontend	4	Rp 240,000.00	Rp 400,000.00	Rp 640,000.00	Rp 413,333.00	Rp 103,333.00
	migrasi ke postgres	Backend	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00
Iteration 2	API Security	Backend	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00
Total Payment Iterasi 2							Rp 4,856,665.00	
Iteration 3	Slicing Catatan	Frontend	4	Rp 240,000.00	Rp 400,000.00	Rp 640,000.00	Rp 413,333.00	Rp 103,333.00

	update endpoint create class	Backend	1	Rp 60,000.00	Rp 100,000.00	Rp 160,000.00	Rp 103,333.00	Rp 103,333.00	
Iteration 3	page 404	UI/UX	2	Rp 120,000.00	Rp 200,000.00	Rp 320,000.00	Rp 206,667.00	Rp 103,333.00	
Iteration 3	logo dan loading state	UI/UX	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00	
Iteration 3	slicing 404, toast, loading, tidak ada koneksi	Frontend	4	Rp 240,000.00	Rp 400,000.00	Rp 640,000.00	Rp 413,333.00	Rp 103,333.00	
Iteration 3	page tidak ada koneksi	UI/UX	2	Rp 120,000.00	Rp 200,000.00	Rp 320,000.00	Rp 206,667.00	Rp 103,333.00	
Iteration 3	Endpoint upload teks dan file(catatan)	Backend	4	Rp 240,000.00	Rp 400,000.00	Rp 640,000.00	Rp 413,333.00	Rp 103,333.00	
Iteration 3	enpoint menampilkan catatan	Backend	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00	
Iteration 3	API documentasi enpoint upload catatan	QA	2	Rp 120,000.00	Rp 200,000.00	Rp 320,000.00	Rp 206,667.00	Rp 103,333.00	
Iteration 3	API dokumentasi enpoint menampilkan catatan	QA	2	Rp 120,000.00	Rp 200,000.00	Rp 320,000.00	Rp 206,667.00	Rp 103,333.00	
Iteration 3	toast	UI/UX	1	Rp 60,000.00	Rp 100,000.00	Rp 160,000.00	Rp 103,333.00	Rp 103,333.00	
Iteration 3	Testing hasil slicing FE	QA	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00	
Total Payment Iterasi 3							Rp 3,203,333.00		
Iteration 4	Buat endpoint search	Backend	4	Rp 240,000.00	Rp 400,000.00	Rp 640,000.00	Rp 413,333.00	Rp 103,333.00	
Iteration 4	Edit endpoint edit catatan	Backend	2	Rp 120,000.00	Rp 200,000.00	Rp 320,000.00	Rp 206,667.00	Rp 103,333.00	
Iteration 4	edit enpoint login	Backend	1	Rp 60,000.00	Rp 100,000.00	Rp 160,000.00	Rp 103,333.00	Rp 103,333.00	
Iteration 4	Draft Catatan	Frontend	1	Rp 60,000.00	Rp 100,000.00	Rp 160,000.00	Rp 103,333.00	Rp 103,333.00	
Iteration 4	Page catatan bagi admin	UI/UX	3	Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00	
Iteration 4	Page forum bagi admin	UI/UX	4	Rp 240,000.00	Rp 400,000.00	Rp 640,000.00	Rp 413,333.00	Rp 103,333.00	

	slicing page catatan bagi admin			Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00	
Iteration 4		Frontend	3						
	slicing page forum bagi admin			Rp 180,000.00	Rp 300,000.00	Rp 480,000.00	Rp 310,000.00	Rp 103,333.00	
Iteration 4		Frontend	3						
	UI testing automation by Firebase			Rp 120,000.00	Rp 200,000.00	Rp 320,000.00	Rp 206,667.00	Rp 103,333.00	
Iteration 4		QA	2						
	Testing endpoint search			Rp 60,000.00	Rp 100,000.00	Rp 160,000.00	Rp 103,333.00	Rp 103,333.00	
Iteration 4		QA	1						
Total Payment Iterasi 4							Rp 2,479,999.00		
Total Payment									Rp 13,123,330.00

Total Payment = RP 13.123.000