

Daily UI #004

Home Loan EMI Calculator — Deep UX/UI Case Study

A mobile-first financial calculator designed to make home-loan estimation understandable, transparent and easy to explore.

01 — Challenge Brief

Prompt: Design a calculation interface. It can be a standard, scientific, financial or specialty calculator.

Objective: Create a calculator that helps users estimate their monthly home-loan payment and understand the overall cost of the loan.

02 — Platform Decision

Platform: Mobile app **Canvas:** 390 × 844 px.

A mobile-first direction makes the experience useful while users browse properties, compare loan options or discuss affordability on the go.

03 — Product Concept

Product: Home Loan EMI Calculator.

The tool estimates monthly EMI from property price, down payment, interest rate and loan tenure. It also explains principal, total interest, total payment and affordability.

04 — Target User

Arjun, 30 — Working Professional.

Goal: Understand whether a potential home loan fits comfortably within his monthly budget.

Needs: Quick calculation, understandable numbers, easy scenario comparison and clear total cost.

Frustrations: Financial jargon, complicated calculators, too many inputs and unclear results.

05 — Problem Definition

Financial calculators often expose users to many numbers without explaining which number matters most. For a home buyer, the immediate question is usually: “How much will I pay every month?”

How might we make home-loan calculation simple enough for anyone to understand while still providing useful financial detail?

06 — User Goal

“I want to quickly calculate my monthly EMI and understand how much the loan will actually cost me.”

07 — UX Goals

- Make inputs easy to edit.
- Keep monthly EMI visually dominant.
- Let users experiment with different loan scenarios.
- Reduce financial jargon.
- Explain principal versus interest clearly.
- Make invalid values easy to identify and fix.

08 — Information Architecture

Section	Content
Header	Back navigation, Home Loan Calculator title
Property	Property price and down payment
Loan	Loan amount, interest rate, tenure
Result	Estimated monthly EMI
Breakdown	Principal, total interest, total payment
Analysis	Affordability and scenario insights
CTA	Calculate EMI / Apply for Home Loan

09 — User Flow

Enter Property Price → Set Down Payment → Set Interest Rate → Select Loan Tenure → Calculate EMI → View Monthly EMI → Explore Breakdown → Compare Scenarios

10 — Input Strategy

Property Price: numeric input + slider.

Down Payment: numeric input + slider.

Interest Rate: percentage input + slider.

Loan Tenure: year selector / slider.

Loan Amount: automatically calculated from property price minus down payment.

Sliders make exploration fast, while direct numeric fields provide precision.

11 — Calculation Logic

The EMI calculation uses the standard reducing-balance loan formula: $EMI = P \times r \times (1+r)^n / ((1+r)^n - 1)$, where P is principal, r is monthly interest rate and n is total monthly payments.

Users do not need to see the formula by default. The interface should focus on the result and reveal calculation details only when useful.

12 — Result Strategy

Your Estimated Monthly EMI
■ **51,287 / month**

Supporting results include loan amount, total interest and total payment. The monthly EMI remains the strongest visual element because it is the most actionable number.

13 — Payment Breakdown

A simple principal-versus-interest visualization helps users understand where their money goes. Dense amortization details are kept secondary and can be revealed progressively.

14 — Affordability Analysis

An optional affordability section compares estimated EMI with monthly income. Any guidance should be labeled as an estimate rather than universal financial advice and users should consider their own expenses.

15 — Scenario Exploration

Users can change one variable at a time—loan amount, interest rate or tenure—and immediately see how the estimated EMI changes. This turns the calculator into a decision-support tool.

16 — Wireframe Exploration

Variation 1 — Input First: Strong focus on entering values, with results below.

Variation 2 — Result Focused: Large EMI result with expandable inputs.

Variation 3 — Full Decision Tool: Inputs, EMI result, breakdown, affordability and scenario exploration.

Selected: Variation 3 because it provides the strongest UX story and helps users make a decision rather than only calculate a number.

17 — Visual Design Direction

Style: Clean + Premium + Financial + Trustworthy.

Primary: #5B5CE2 **Background:** #F7F7FA **Surface:** #FFFFFF **Text:** #171717.

Positive: #16A34A.

Typography: Inter, with large numbers for EMI, clear labels, rounded controls, soft shadows and generous spacing.

18 — Interaction States

State	Behavior
Default	Inputs show sensible starting values and a clear Calculate action.
Editing	Numeric values can be changed directly or with sliders.
Calculating	Lightweight feedback while the result updates.
Result	Monthly EMI and breakdown become visually dominant.
Invalid	Field-level feedback explains the required range or format.
Scenario	Changing a variable updates the estimated result.

19 — Error Handling

Examples:

- “Down payment cannot be greater than the property price.”
- “Enter an interest rate between 1% and 20%.”
- “Loan tenure must be between 1 and 30 years.”

Errors should appear close to the relevant field and explain how to correct the problem.

20 — Accessibility & Responsive Thinking

The design is mobile-first, with large touch targets, visible labels, readable numbers and clear focus states. The same information architecture can expand for tablet/web without changing the core hierarchy. Charts should not rely on color alone.

21 — Key Design Decisions

1. **Mobile-first** for quick calculations on the go.
2. **EMI-first hierarchy** makes the most important answer dominant.
3. **Sliders + inputs** combine exploration and precision.
4. **Automatic loan amount** removes unnecessary manual work.
5. **Progressive detail** keeps the first result simple.
6. **Scenario planning** supports comparison.
7. **Responsible financial messaging** avoids presenting affordability guidance as guaranteed advice.

22 — Success Criteria

A user should be able to enter loan details quickly, understand each input, calculate estimated EMI, see total cost, understand principal versus interest and experiment with scenarios without confusion.

23 — Final UI Review

The high-fidelity direction combines loan inputs with a prominent EMI result, payment breakdown, amortization preview, affordability analysis and “What if?” scenario exploration. Soft surfaces and purple-blue accents make the financial tool approachable without becoming playful.

24 — Learnings

A good calculator is not only about producing a mathematically correct number. It should help users understand what the number means and what decision they can make from it. This challenge therefore evolved from a simple EMI calculator into a small decision-support tool.

Portfolio Takeaway

Daily UI #004 demonstrates calculation UX, financial information hierarchy, input design, real-time feedback, data visualization, scenario exploration, responsive thinking, accessibility and responsible financial communication.