

Note Calculator

Overview

CalcNote is a smart notepad that performs real-time calculations as users type numbers and formulas. It's ideal for daily expense tracking, budgeting, invoice estimates, and quick math. This app combines the ease of a text editor with the functionality of a calculator.

1. Core Functionality

Note + Calculator Hybrid

- Users can type freeform notes with embedded expressions
- Expressions are evaluated in real-time

Example:

Coffee: 3.50

Lunch: 7.80

Total: =3.50 + 7.80

Live Calculation Engine

- Detect and evaluate math expressions on the fly
- Auto-recalculate when any number is changed
- Support for referencing previous line results (like @1, @2 for line numbers)

Editable History

- All entries editable — changing a value should auto-update all dependent results

2. Text Editor Features

- Basic formatting (bold, highlight optional)
- Indentation support (for sub-categories)
- Line numbering (optional)
- Auto-suggestions for functions or previous lines
- Syntax highlighting for numbers and formulas

3. Calculation Features

Math Operations

Standard: +, -, *, /, %

Parentheses for grouping: (3 + 2) * 4

Decimal and currency support

Inline functions: `sum()`, `avg()`, `min()`, `max()`

Variables & References

Use variables like `tax = 0.1` and reuse: `price * (1 + tax)`

Line reference: `@1 + @2`

4. Customization & Settings

Theme (light/dark)

Font size adjustment

Decimal precision settings (e.g., 2 digits)

Currency symbol preferences

Auto-save toggle

Backup/export preferences

5. Data Management

Note Saving & History

Save individual notes/sheets (named)

Local auto-save with manual save option

Cloud sync (optional phase)

Edit history with undo/redo

Exporting

Export notes to:

Plain text

PDF

CSV (numbers only)

Share note with calculations embedded

6. Security & Privacy

App-level passcode/biometric lock (Face ID / Fingerprint)

All notes stored locally by default
Option to sync/export securely (only with consent)

7. Optional Features (Advanced/Future Versions)

Cloud backup (Google Drive, Dropbox)
Markdown-style note support
Charts for visualizing totals
Tagging system for notes
Voice input for note entry
Real-time collaboration (like Google Docs)

8. UI/UX Design

Simple, minimal interface
Calculator-style input bar (optional)
Tabs or folders for organizing notes
Smooth scrolling with large documents
No ads in paid version (if freemium model used)

9. Testing Requirements

Unit tests for calculation engine
UI testing for Android/iOS screens
Edge case testing: invalid syntax, large notes
Performance testing for 1000+ line notes

10. Technical Stack (Suggestion)

Component	Recommendation
Platform	React Native / Flutter (cross-platform)
State Management	Redux / Riverpod / Provider
Calc Engine	Custom parser or math.js-like lib
Storage	SQLite / Hive (local), optional Firebase for cloud
Export	react-native-html-to-pdf / CSV writer

11. Monetization (Optional)

Free version with:

- Limited exports

- Limited saved notes

Pro version:

- Unlimited saves

- Export options

- Cloud sync

- No ads

Summary of Must-Have Features

Category	Key Features
Core Functionality	Real-time calculation while typing, expression evaluation, editable entries, referencing previous lines (@1, @2)
Text Editor	Freeform note-taking with basic formatting, indentation, line numbering, syntax highlighting, and auto-suggestions
Calculation Engine	Support for standard math operators (+, -, *, /, %), parentheses, decimal/currency, inline functions (sum, avg, min, max), variables and references
Customization	Light/dark theme, font size, decimal precision, currency symbols, auto-save and backup/export options
Data Management	Save notes locally with auto-save, manual save, note history with undo/redo, export to plain text, PDF, CSV, and share
Security & Privacy	App-level passcode/biometric lock, local storage by default, secure sync/export with user consent

UI/UX	Simple minimal design, optional calculator-style input bar, smooth scrolling, tabs/folders for note organization
Performance	Fast, real-time expression parsing and calculation, reliable editing with immediate result updates
Testing & Stability	Unit tests for calculation engine, UI tests on mobile platforms, edge case handling (invalid syntax, large notes)



Example 1: Daily Expense Calculation

Coffee: 3.50

Lunch: 8.20

Snacks: 2.30

Total: $= 3.50 + 8.20 + 2.30$

👉 Output:

Total: 14.00



Example 2: Project Estimate

Design: 20 hours x \$30 = 600

Development: 50 hours x \$40 = 2000

QA: 15 hours x \$25 = 375

Total Cost: $= 600 + 2000 + 375$

👉 Output:

Total Cost: 2975



Example 3: Using Variables

```
rate = 45
hours = 36
tax = 0.10
```

```
Base Cost: =rate * hours
Tax Amount: =Base Cost * tax
Total: =Base Cost + Tax Amount
```

👉 Output:

```
Base Cost: 1620
Tax Amount: 162
Total: 1782
```



Example 4: Monthly Budget Tracker

```
Rent: 950
Groceries: 300
Utilities: 150
Transportation: 120
Miscellaneous: 100
Monthly Expenses: =sum(950, 300, 150, 120, 100)
```

👉 Output:

```
Monthly Expenses: 1620
```



Example 5: Referencing Previous Lines

```
1. Item A: 150
2. Item B: 220
3. Subtotal: =@1 + @2
4. Discount (10%): =@3 * 0.1
5. Final Price: =@3 - @4
```

👉 Output:

```
3. Subtotal: 370
4. Discount (10%): 37
5. Final Price: 333
```