

Design document Project 2: Budget Lens

Project description

Most people don't realize they spend \$180/month on coffee or \$300 on unused subscriptions until it's too late. BudgetLens solves this problem by providing a simple, intuitive web application that lets users quickly log expenses (under 30 seconds), set category-based budgets, and receive real-time visual feedback before overspending.

Unlike spreadsheets that get abandoned or complex financial apps that overwhelm users, BudgetLens provides instant visual feedback through color-coded progress bars and pie charts. The platform is designed to help college students manage tight budgets and families identify spending leaks, making financial awareness effortless.

User Personas

- **Freelance Designer** - Tracks business expenses for tax deductions, needs quick mobile entry
- **College Student** - Limited \$1,200/month budget, discovers small purchases add up to overspending
- **Family Budget Manager** - Controls household spending across multiple categories, saves for goals

Persona 1: Alex Rivera - The Freelance Designer

| | |
|--------------|---|
| Age | 28 |
| Occupation | Freelance Graphic Designer |
| Income | \$3,500-5,000/month (variable) |
| Goals | Track business expenses separately for tax deductions, understand where personal spending goes, quick mobile-friendly entry between client meetings |
| Frustrations | Income varies month to month making budgeting hard, forgets to log receipts, spreadsheets are too tedious for on-the-go tracking |

Usage Scenario: *Alex finishes a coffee meeting with a client and wants to log the \$12.50 expense before forgetting. Opens BudgetLens, taps Add Expense, selects 'Coffee' category, types the amount, and it's saved in under 15 seconds. Later that evening, Alex checks the*

dashboard pie chart and notices that 'Coffee' has already consumed 60% of the monthly food budget.

Persona 2: Maya Chen - The College Student

| | |
|---------------------|---|
| Age | 21 |
| Occupation | Computer Science Junior at Northeastern |
| Income | \$1,200/month (part-time job + parents) |
| Goals | Stay within a tight monthly budget, discover which small purchases add up, save for spring break trip |
| Frustrations | Doesn't realize how much is spent on food delivery and subscriptions, tried Mint but found it overwhelming, needs something simple and visual |

Usage Scenario: *Maya sets a \$200 food budget and a \$50 entertainment budget at the start of the month. Two weeks in, she opens the Budgets page and sees her food progress bar is yellow (at 82%). The alert tells her she's approaching her limit. She decides to cook more this week instead of ordering DoorDash, saving herself from overspending.*

Persona 3: David & Sarah Park - The Family Budget Managers

| | |
|---------------------|--|
| Age | 35 & 33 |
| Occupation | Software Engineer & Teacher |
| Income | \$8,500/month combined |
| Goals | Control household spending across multiple categories, identify spending leaks, save \$500/month for vacation fund |
| Frustrations | Hard to track spending from two people, utility bills keep creeping up unnoticed, current banking apps don't give category-level budget alerts |

Usage Scenario: *David logs the monthly electric bill of \$185 under Utilities. Sarah checks the dashboard that evening and sees the monthly summary: Utilities already at \$420 this month, which is 90% of their \$470 budget. The red warning prompts them to review what else was categorized under Utilities and they discover they forgot to cancel an old cloud storage subscription (\$15/month).*

User stories (use cases but with a story)

Kunal Sachin Takke - Expenses:

- As a user, I want to add expenses with amount/category/description/date, so I can log transactions instantly
- As a user, I want to view all expenses with category badges and totals, so I review spending history
- As a user, I want to edit or delete expenses, so I can correct mistakes
- As a user, I want to filter expenses by date range and category, so I analyze specific periods
- As a user, I want to see a pie chart of spending by category, so I understand where money goes
- As a user, I want to see a dashboard with recent expenses and monthly totals, so I get a financial snapshot

Kunal Juvvala - Budgets:

- As a user, I want to create monthly budgets for categories with spending limits, so I control spending
- As a user, I want to view budget progress with color-coded bars (green/yellow/red), so I know if I'm on track
- As a user, I want to edit or delete budgets, so I adjust to changing goals
- As a user, I want alerts when reaching 80% of budget, so I adjust before overspending
- As a user, I want to see budget status on dashboard, so I monitor all categories at once
- As a user, I want monthly summary reports showing spending vs budgets, so I review performance

Design mockups

The following wireframes illustrate the layout and structure of each page in BudgetLens. The application consists of three main pages: Dashboard, Expenses, and Budgets.

1. Dashboard Page (index.html)

Landing page showing a financial overview at a glance.

| BudgetLens [Dashboard] [Expenses] [Budgets] | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------------------------------|--------------------------------|---------------------------|---------------|-------------------|--------------|---------------|----------|--|------------------------------------|----------|-------------------------------------|---------------|---------------------------------------|----------|--|-------------|------------------------------------|-------------|----------|---------------|-----|----------|---------------|--------------|-----|----------|
| Dashboard | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Your financial overview at a glance | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPENT THIS MONTH \$1,245.00 | TOTAL BUDGET \$2,800.00 | REMAINING \$1,555.00 | TRANSACTIONS 47 | | | | | | | | | | | | | | | | | | | | | | | | |
| Spending by Category <table border="1"><tr><td>Food 35%</td><td>Transport 20%</td></tr><tr><td>Entertainment 15%</td><td>Shopping 12%</td></tr><tr><td>Groceries 10%</td><td>Other 8%</td></tr></table> | | | Food 35% | Transport 20% | Entertainment 15% | Shopping 12% | Groceries 10% | Other 8% | Recent Expenses <table border="1"><tr><td>Lunch at cafe Food - 2026-02-18</td><td>-\$12.50</td></tr><tr><td>Uber ride Transport - 2026-02-17</td><td>-\$18.00</td></tr><tr><td>Netflix Subscriptions - 2026-02-15</td><td>-\$15.99</td></tr><tr><td>Weekly groceries Groceries - 2026-02-14</td><td>-\$87.30</td></tr><tr><td>Iced coffee Coffee - 2026-02-14</td><td>-\$5.75</td></tr></table> | Lunch at cafe Food - 2026-02-18 | -\$12.50 | Uber ride Transport - 2026-02-17 | -\$18.00 | Netflix Subscriptions - 2026-02-15 | -\$15.99 | Weekly groceries Groceries - 2026-02-14 | -\$87.30 | Iced coffee Coffee - 2026-02-14 | -\$5.75 | | | | | | | | |
| Food 35% | Transport 20% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Entertainment 15% | Shopping 12% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Groceries 10% | Other 8% | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lunch at cafe Food - 2026-02-18 | -\$12.50 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Uber ride Transport - 2026-02-17 | -\$18.00 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Netflix Subscriptions - 2026-02-15 | -\$15.99 | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Iced coffee Coffee - 2026-02-14 | -\$5.75 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Budget Status <table border="1"><thead><tr><th>Category</th><th>Spent / Limit</th><th>Progress Bar</th><th>Status</th></tr></thead><tbody><tr><td>Food</td><td>\$280 / \$400</td><td>70%</td><td>On track</td></tr><tr><td>Transport</td><td>\$185 / \$200</td><td>93%</td><td>Warning</td></tr><tr><td>Coffee</td><td>\$55 / \$50</td><td>110%</td><td>Over budget</td></tr><tr><td>Shopping</td><td>\$120 / \$300</td><td>40%</td><td>On track</td></tr><tr><td>Entertainment</td><td>\$45 / \$150</td><td>30%</td><td>On track</td></tr></tbody></table> | | | | Category | Spent / Limit | Progress Bar | Status | Food | \$280 / \$400 | 70% | On track | Transport | \$185 / \$200 | 93% | Warning | Coffee | \$55 / \$50 | 110% | Over budget | Shopping | \$120 / \$300 | 40% | On track | Entertainment | \$45 / \$150 | 30% | On track |
| Category | Spent / Limit | Progress Bar | Status | | | | | | | | | | | | | | | | | | | | | | | | |
| Food | \$280 / \$400 | 70% | On track | | | | | | | | | | | | | | | | | | | | | | | | |
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| Shopping | \$120 / \$300 | 40% | On track | | | | | | | | | | | | | | | | | | | | | | | | |
| Entertainment | \$45 / \$150 | 30% | On track | | | | | | | | | | | | | | | | | | | | | | | | |

2. Expenses Page (expenses.html)

Full CRUD for expenses with filtering by category and date range.

| BudgetLens [Dashboard] [Expenses] [Budgets] | | | | |
|---|------------------|---|--|------------------|
| Expenses | | | [+ Add Expense] | |
| Add New Expense (form toggles on button click) | | | | |
| Amount (\$) <input type="text" value="0.00"/> | | Category <input type="text" value="Select category"/> | | |
| Description <input type="text" value="What did you spend on?"/> | | Date <input type="text" value="mm/dd/yyyy"/> | | |
| [Add Expense] [Cancel] | | | | |
| Filters | | | | |
| Category <input type="text" value="All Categories"/> | | Start Date <input type="text" value="mm/dd/yyyy"/> | End Date <input type="text" value="mm/dd/yyyy"/> | [Filter] [Clear] |
| Total: | | | \$1,245.00 | |
| Date | Description | Category | Amount | Actions |
| 2026-02-18 | Lunch at cafe | [Food] | \$12.50 | [Edit] [Delete] |
| 2026-02-17 | Uber ride | [Transport] | \$18.00 | [Edit] [Delete] |
| 2026-02-15 | Netflix | [Subscriptions] | \$15.99 | [Edit] [Delete] |
| 2026-02-14 | Weekly groceries | [Groceries] | \$87.30 | [Edit] [Delete] |
| 2026-02-14 | Iced coffee | [Coffee] | \$5.75 | [Edit] [Delete] |
| 2026-02-13 | Movie tickets | [Entertainment] | \$24.00 | [Edit] [Delete] |

3. Budgets Page (budgets.html)

Budget management with alerts, monthly summary, and progress cards.

| | | |
|---|-----------------------------------|--------------------------|
| BudgetLens [Dashboard] [Expenses] [Budgets] | | |
| Budgets | [+ Set Budget] | |
| Alerts (shown when budget is 80% or more used) | | |
| Warning: Transport - Approaching limit! Spent \$185.00 of \$200.00 limit (93%) | | |
| Over Budget: Coffee - Over budget! Spent \$55.00 of \$50.00 limit (110%) | | |
| Set New Budget (form toggles on button click) | | |
| Category Select category ▾ | Monthly Limit (\$) 0.00 | Month 2026-02 |
| [Set Budget] [Cancel] | | |
| TOTAL BUDGET \$2,800.00 | TOTAL SPENT \$1,245.00 | ON TRACK 7 |
| OVER BUDGET 1 | | |
| Budget Progress | | |
| Food 2026-02 | | Transport 2026-02 |
| Spent: \$280.00 | Limit: \$400.00 | Spent: \$185.00 |
| | | Limit: \$200.00 |