Spendwise - Product Requirements Document (PRD)

Version: 1.0
Date: January 6, 2026
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1. Executive Summary

Spendwise is a modern expense tracking mobile application built with React Native and Expo. The app empowers users to take control of their personal finances through intuitive expense tracking, insightful analytics, and smart budgeting tools.

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2. Product Vision

Mission: To simplify personal finance management by providing an intuitive, intelligent, and comprehensive expense tracking solution.

Vision: Become the go-to expense tracking app that helps users achieve their financial goals through smart insights and seamless user experience.

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3. Target Audience

Segment	Description
Young Professionals (22-35)	Tech-savvy individuals managing personal finances
College Students	Budget-conscious users tracking daily expenses
Freelancers & Gig Workers	Users needing to track business and personal expenses
Families	Shared household expense management

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4. Core Features (v1.0)

4.1 Expense Management

Feature	Description
Add Expense	Record with amount, category, payment method, description, date
Edit Expense	Modify existing expense records
Delete Expense	Remove expenses with confirmation dialog
Built-in Calculator	Quick in-app calculation for complex amounts

4.2 Categories

10 predefined categories with visual icons and colors: - Food, Transport, Shopping, Entertainment, Bills - Health, Education, Travel, Subscriptions, Other

4.3 Payment Methods

6 payment options: - Cash, UPI, Credit Card, Debit Card, Net Banking, Wallet

4.4 View Modes & Filtering

- Daily, Weekly, Monthly expense views
- Date/period navigation with arrows
- Category-based filtering
- Payment method filtering
- Pull-to-refresh functionality

4.5 Insights & Analytics

- Pie chart visualization by category
- Category breakdown with percentages and progress bars
- Historical trend bar charts (7 days / 6 months / 3 years)
- Period comparison tool (compare days, months, years)
- Click on category to filter expenses

4.6 Budget Management

- Monthly budget setting
- Carry-over budget toggle
- Real-time budget tracking
- Budget alerts at 75%, 90%, and 100% usage

4.7 Settings & Preferences

- Multi-currency support (INR, USD, EUR, GBP, JPY)
- Theme options (Light, Dark, System)
- User profile management

4.8 Offline Support

- Automatic offline expense saving
- Auto-sync when connection restores
- Graceful error handling with informative messages

4.9 Authentication

- Email/password registration
- JWT-based secure login
- Persistent sessions with AsyncStorage
- Logout functionality

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5. Tech Stack

Frontend

- React Native with Expo
- Expo Router (file-based routing)

- Redux Toolkit (state management)
- AsyncStorage (local persistence)
- TypeScript

Backend

- Node.js with Express
- MongoDB with Mongoose
- JWT Authentication
- bcrypt (password hashing)

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6. API Endpoints

Authentication

Method	Endpoint	Description
POST	`/api/auth/register`	Register new user
POST	`/api/auth/login`	User login

User

Method	Endpoint	Description
GET	`/api/users/profile`	Get user profile
PUT	`/api/users/profile`	Update user profile

Expenses

Method	Endpoint	Description
GET	`/api/expenses`	Get all expenses
POST	`/api/expenses`	Create expense
PUT	`/api/expenses/:id`	Update expense
DELETE	`/api/expenses/:id`	Delete expense

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7. Planned Features (v1.1)

7.1 Media Attachments

ID	Requirement	Priority
MED-01	Capture photo from camera and attach to expense	P0
MED-02	Select images from gallery	P0
MED-03	Attach multiple images per expense (max 5)	P1
MED-04	View attachments in full-screen	P0
MED-05	Delete individual attachments	P0
MED-06	Image compression for storage optimization	P1

7.2 Custom Categories

ID	Requirement	Priority
CAT-01	Create custom expense categories	P0
CAT-02	Custom category icons and colors	P1
CAT-03	Reorder categories	P2

7.3 Recurring Expenses

ID	Requirement	Priority
REC-01	Create recurring expense templates	P0
REC-02	Frequencies: Daily, Weekly, Monthly, Yearly	P0
REC-03	Auto-add expenses on schedule	P0
REC-04	Manage/edit/pause recurring expenses	P1
REC-05	Due date reminders	P1

7.4 Export & Reports

ID	Requirement	Priority
EXP-01	Export to CSV format	P0
EXP-02	Export to PDF with graphs	P1
EXP-03	Custom date range for exports	P0
EXP-04	Share reports via apps	P1

7.5 Tags & Notes

ID	Requirement	Priority
TAG-01	Add custom tags to expenses	P1
TAG-02	Create and manage tag library	P1
TAG-03	Filter expenses by tags	P1

7.6 Security Enhancements

ID	Requirement	Priority
SEC-01	Biometric authentication (Fingerprint/Face ID)	P1
SEC-02	PIN lock option	P1
SEC-03	Auto-lock timer setting	P2

8. Future Scope (v2.0+)

8.1 AI-Powered Insights

- **Smart Spending Analysis:** AI analyzes spending patterns and provides personalized recommendations

- **Anomaly Detection:** Alerts for unusual spending behavior
- **Budget Suggestions:** AI-recommended budget adjustments based on historical data
- **Category Predictions:** Auto-suggest category based on expense description
- **Spending Forecasts:** Predict end-of-month spending based on current trends
- **Savings Tips:** Personalized suggestions to reduce expenses in specific categories

8.2 Income & Money Addition

- **Income Tracking:** Add income entries with source categories (Salary, Freelance, Investments, Gifts, Refunds, Other)
- **Recurring Income:** Set up recurring income for regular payments (monthly salary, etc.)
- **Net Balance Display:** Show Income - Expenses balance on home screen
- **Income History:** View and filter all income entries
- **Savings Rate Tracking:** Track percentage of income saved each month
- **Income vs Expense Charts:** Visual comparison in insights

8.3 Splitwise Integration (Expense Splitting & Sharing)

Core Splitting Features: - Link expenses to contacts from device phonebook - Split expense equally or by custom amounts/percentages - Track per-person share amounts

Payment Status Tracking: - Mark each participant as **Paid** or **Non-Paid** - Record payment date when settled - Outstanding balance tracking (who owes whom)

Account Linking: - Invite contacts to link their Spendwise accounts - Shared expense visibility for linked users - Sync payment status across linked accounts

Sharing & Notifications: - Share expense details via WhatsApp, SMS, Email - Push notifications when: - Someone adds you to a split expense - Payment reminder (for unsettled splits) - Someone marks their share as paid - In-app notification center for all split activity

Settlement Features: - Suggest optimized settlement (minimize transactions) - Mark all debts as settled with one tap - Settlement history and records

8.4 Additional Future Features

- Receipt scanning with OCR (auto-extract expense details)
- Location-based expense tracking (geo-tagging)
- Shared family/group accounts
- Bank SMS parsing for auto-expense logging
- Home screen widgets
- Cloud backup and restore
- Multi-device sync

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9. Database Models

Current Models

```
User: userId, name, email, password, currency, budget, theme
Expense: expenseId, userId, amount, category, paymentMethod, description, date
Budget: budgetId, userId, amount, carryOver, month
Category: categoryId, name, icon, color
```

Future Models (v2.0+)

```
Income: userId, amount, category, source, date, isRecurring, recurringConfig
SplitExpense: expenseId, participants[], splitType, createdBy
Participant: contactId, name, phone, shareAmount, isPaid, paidDate
```

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10. UI Screens

Current Screens

Screen	Description
Welcome	Landing page with login/register options
Login	Email/password authentication
Register	New user registration
Home	Dashboard with daily summary and quick actions
Expenses	List view with filtering options
Add Expense	Form to create new expense
Edit Expense	Form to modify existing expense
Insights	Charts and analytics dashboard
Profile	User settings and preferences

Planned Screens (v1.1)

- Export Screen
- Security Settings
- Category Manager

Future Screens (v2.0+)

- Income List & Add Income
- Split Details & Balances
- AI Insights Dashboard
- Notification Center

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11. Appendix - Competitive Analysis

Feature	Spendwise	Splitwise	YNAB	Money Manager
Expense Tracking	Yes	Yes	Yes	Yes
Income Tracking	Future	No	Yes	Yes
Expense Splitting	Future	Yes	No	No
AI Insights	Future	No	No	No
Receipt Scanning	Future	No	No	Yes
Offline Support	Yes	No	No	Yes
Free Core Features	Yes	Yes	No	Yes

Document last updated: January 6, 2026