



# Personal Expense Tracker – Pea

A full-stack web application to help users monitor and manage their personal finances by tracking income, expenses, and budget goals in a simple, intuitive interface.

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## Features

### User Management

- Signup/Login with validation
- Secure password encryption
- JWT-based session management

### Expense Tracking

- Add/edit/delete expenses
- View detailed expense logs
- Categorize expenses (e.g., Food, Transport, Shopping)

### Budgeting

- Set monthly budget goals
- Track how much is spent vs. remaining
- Warnings when nearing limits

### Analytics

- Daily/Monthly expense graph
- Expense breakdown by category
- Summary dashboard

## Tech Stack

Layer	Technology
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Frontend	HTML, CSS, JavaScript
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Frontend UI	React (optional upgrade), Bootstrap
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Backend	Java (Spring Boot)
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Database	MySQL
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Security	Spring Security, JWT Auth
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Build Tools	Maven
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## **Layer            Technology**

Deployment Can be deployed on Render/Vercel/Heroku

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### **Folder Structure**

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Pea/

```
|—— backend/
|   |—— controller/
|   |—— dto/
|   |—— entity/
|   |—— repository/
|   |—— service/
|   |—— config/
|   |—— Application.java
|—— frontend/
|   |—— index.html
|   |—— app.js
|   |—— style.css
|   |—— ...
|—— README.md
|—— pom.xml
```

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### **Modules**

#### **1. User Module**

- Register a new user
- Login existing users
- Secure authentication using JWT
- Role-based access control (optional)

#### **2. Expense Module**

- Create, update, delete, and list expenses
- Filter by date, category
- Store expense against logged-in user

### 3. Budget Module

- Set monthly budget
- Compare actual spending vs budget
- Alerts when close to threshold

### 4. Dashboard & Analytics

- Dynamic charts (Pie, Bar)
  - Daily, Weekly, Monthly reports
  - Top spending categories
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### Security Features

- JWT Token generation & validation
  - BCrypt password hashing
  - Secure API routes using Spring Security
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### Testing

- Postman used for testing REST APIs
  - Unit testing using JUnit
  - Integration testing (optional)
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### Setup & Run

#### Backend

bash

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cd backend

mvn clean install

mvn spring-boot:run

#### Frontend (Simple HTML/CSS/JS)

Open index.html in browser

or if React:

bash

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cd frontend

npm install

npm start

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### API Endpoints (Sample)

Method	Endpoint	Description
POST	/api/auth/register	Register user
POST	/api/auth/login	Login user
POST	/api/expenses	Add expense
GET	/api/expenses	List expenses
POST	/api/budget	Set budget
GET	/api/budget	Get budget info

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### Future Improvements

- Multi-user support with dashboard
  - Notifications for limit breaches
  - Export to Excel/CSV
  - Mobile version
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### Screenshots

Add some UI screenshots here (Login page, Dashboard, Expense chart, etc.)

The screenshot shows the main dashboard of the Expense Tracker. At the top, there's a pie chart titled "Where is your money going?" with categories: Food (red), Transport (orange), Shopping (blue), Health (green), and Other (purple). Below the chart are two images: one of a woman holding a fan of money with the text "Let's maximize our savings for a better future!" and another of a hand stacking coins with the text "Track your money like a pro! 🚀".

## Your Expense Dashboard

**Add a New Expense**

Fields: Amount, Description, Select Category, dd-mm-yyyy

**Buttons:** Add

**Analysis Sections:**

- Weekly Analysis - Total:** Weekly Expenses pie chart showing proportions for Wednesday, Thursday, Friday, Saturday, Sunday, Monday, and Tuesday.
- Monthly Analysis - Total:** Monthly Expenses pie chart showing proportions for July 1st, July 4th, July 7th, and July 6th.
- Yearly Analysis - Total:** Yearly Expenses pie chart showing a single segment for July.

This screenshot shows a different view of the dashboard. The analysis sections are labeled "Total" instead of "Analysis".

**Analysis Sections:**

- Weekly Analysis - Total: ₹0**: Weekly Expenses pie chart showing proportions for Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, and Monday.
- Monthly Analysis - Total: ₹0**: Monthly Expenses pie chart showing proportions for July 1st, July 2nd, July 3rd, and July 02.
- Yearly Analysis - Total: ₹0**: Yearly Expenses pie chart showing a single segment for July.

**Add a New Expense**

Fields: Amount, Description, Select Category, dd-mm-yyyy

**Buttons:** Add