Project Report

Project Title: PaisaPath – Expense Tracker

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# Introduction

PaisaPath is a full-stack expense tracking application developed to simplify personal and small team financial management. It enables users to record income, track expenses, analyze spending patterns, and generate insightful reports. The project is designed with a Java Spring Boot backend and a React.js frontend, ensuring both performance and user-friendliness.  
  
This application also serves as a practical learning resource in modern full-stack development using Java + React with strong focus on usability and real-world features.

# Objectives

- To provide a secure platform for tracking financial transactions.

- To simplify the process of adding, categorizing, and filtering income and expenses.

- To deliver visual insights through interactive dashboards.

- To support data export and notifications for improved financial management.

- To ensure responsive and intuitive UI/UX using modern frontend technologies.

# Key Features

* • Authentication & Security

- Secure registration and login with JWT Authentication.

- Cloud-based profile picture uploads via Cloudinary.

* • Income & Expense Management

- Add, edit, and delete income/expense entries.

- Categorize and filter transactions.

- Input validation to ensure accurate data entry.

* • Dashboard & Analytics

- Interactive visualizations with React Charts.

- Personalized dashboards for expense vs. income tracking.

- Category-based insights with filters.

* • Reports & Notifications

- Export transaction history as Excel reports.

- Email delivery of reports.

- Automated daily email reminders.

* • User Experience

- Responsive UI with Tailwind CSS.

- Emoji picker for personalization.

- Toast notifications with React Hot Toast.

- Intuitive navigation using menubar and sidebar.

# Technology Stack

Frontend: React.js, Axios, Lucide React, Tailwind CSS, React Hot Toast, Emoji Picker, React Charts

Backend: Java Spring Boot, Spring Data JPA, Spring Security with JWT Authentication, MySQL Database

Deployment: Backend - Render, Frontend - Netlify, Media Storage - Cloudinary

# Workflow & Development Journey

- Planning & Demo: Designed flow of authentication, dashboard, and expense modules.

- Backend Development: Built APIs for register, login, categories, income/expense, filtering, and reports.

- Frontend Development: Implemented signup/login, dashboard, category, income, and expense modules.

- Integrations: Profile upload, emoji picker, toast notifications, Excel export, and email notifications.

- Deployment: Backend deployed on Render, frontend on Netlify.

# Advantages

- Secure and reliable authentication system.

- Easy to use with responsive and modern UI.

- Automated reports and reminders improve financial management.

- Real-time visual analytics for better decision-making.

# Limitations

- Limited to individual and small team usage.

- Requires internet connection for backend and email features.

- Basic reporting (Excel + Email) without advanced BI integration.

# Conclusion

The PaisaPath Expense Tracker successfully integrates Java Spring Boot, React.js, MySQL, and Tailwind CSS to deliver a complete financial management solution. It ensures secure authentication, intuitive UI, automated reporting, and real-time analytics, making it a reliable tool for tracking personal and small team expenses.