Scoop Labs Project Lab

Full Stack Development Project Brief

Project Title: Personal Finance Tracker
Difficulty Level: Intermediate
Estimated Duration: 4–5 Weeks
Suggested Stack: MERN (MongoDB, Express.js, React, Node.js)

Project Overview

In this project, you will build a **Personal Finance Tracker web application** that allows users to manage and monitor their income and expenses. The application will enable users to record financial transactions, categorize expenses, and visualize spending patterns through interactive charts.

The goal of this project is to help students understand how to build a **full-stack web application with authentication, database integration, and data visualization**.

Students will gain practical experience handling **user-specific data, financial transactions, and analytical dashboards** using modern web technologies.

All tools and platforms required for this project are **freely available**, allowing students to complete the project without paid services.

Why This Project Matters

Many modern applications involve **user accounts, data storage, and analytics dashboards**. Understanding how to design systems that store and analyze user data is an essential skill for full-stack developers.

A finance tracker is a practical example of such an application because it involves **data management, CRUD operations, authentication, and data visualization**.

By completing this project, students will learn how to build a real-world application where users can track financial activity and generate insights from their data.

This project also demonstrates the ability to build **interactive dashboards and analytics features**, which are commonly used in many professional web applications.

Learning Outcomes

By completing this project, students will learn and practice:

- Building full-stack applications using the **MERN stack**
- Implementing **user authentication and authorization**
- Designing and managing database schemas
- Creating RESTful APIs for handling user data
- Performing CRUD operations on financial transactions
- Visualizing financial data using charts and graphs
- Managing user-specific data securely
- Building dashboards that display analytical insights

Project Requirements

Your finance tracker application should include the following functionality:

User Authentication

- User registration and login functionality
- Secure authentication system to ensure that each user can access only their own data

Transaction Management

- Add new income and expense entries
- Edit or delete existing transactions
- Store transaction details such as amount, date, category, and description

Expense Categories

- Allow users to categorize expenses (example: Food, Transport, Shopping, Bills)
- Provide category-based expense tracking

Budget Tracking

• Users should be able to set monthly budgets
• Track total income and expenses within a given period

Data Visualization

• Display financial insights using charts or graphs
• Example visualizations may include:

• Monthly income vs expenses
• Expense distribution by category

Responsive Dashboard

• A dashboard view where users can easily view their financial summary
• The application should work properly on **desktop and mobile devices**

Technical Guidelines

Students are encouraged to follow the guidelines below while implementing the project.

Frontend

• Use **React** to build the user interface
• Use **HTML, CSS, and JavaScript** for styling and functionality
• Use a charting library such as **Chart.js or Recharts** for data visualization

Backend

• Use **Node.js with Express.js** to create backend APIs
• Implement authentication using secure practices (such as token-based authentication)

Database

• Use **MongoDB** to store user accounts and financial transactions
• Design a clear database structure for users, transactions, and categories

Free Development Tools

Students can complete this project using the following free tools:

- **VS Code** for development
- **GitHub** for version control and repository hosting
- **MongoDB Atlas (Free Tier)** for database hosting
- **Vercel / Netlify** for frontend deployment
- **Render** for backend hosting

These platforms offer free tiers suitable for this project.

Bonus Challenges (Optional)

Students who want to extend their project can add additional features such as:

- Recurring transactions (monthly expenses like rent or subscriptions)
- Budget alerts when spending exceeds limits
- Export financial data as CSV or report files
- Multi-currency support
- Advanced analytics such as spending trends

These enhancements demonstrate stronger full-stack development and analytical capabilities.

Submission Guidelines

To receive the **Project Completion E-Certificate**, students must submit the following:

Required

• GitHub repository link containing the complete project source code
• Live deployed project link

Students can deploy their project using free platforms such as **Vercel, Netlify, or Render**.

Optional (Recommended)

• 2–3 screenshots demonstrating the application interface and features

All submissions must be made through the **official Scoop Labs Project Lab submission form**.

Submission Form:
https://scooplabs.in/project-lab

Ensure that your GitHub repository includes a **README file explaining the project setup and features**.

Certification

Students who successfully complete and submit their project will receive a **Project Completion E-Certificate from Scoop Labs**, an **Authorized Training Partner of the National Skill Development Corporation (NSDC)** under the **Skill India Mission**.

This certification recognizes the successful completion of an industry-oriented development project.

Project Showcase Opportunity

Selected high-quality submissions may be **featured in the Scoop Labs Project Gallery**.

Projects showcased in the gallery serve as a **public portfolio reference**, providing additional credibility when students share their work with recruiters and potential employers.

Need Help?

If you have questions or face issues while building the project, you can contact the Scoop Labs team for guidance.

Support Email:
info@scooplabs.in

Scoop Labs Project Lab

Building **industry-ready projects for aspiring developers.**

Scoop Labs is an **Authorized Training Partner of the National Skill Development Corporation (NSDC)** under the **Skill India Mission**, committed to helping learners develop practical technical skills through real-world projects.