File Sharing App

A PROJECT REPORT

Submitted by

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in partial fulfilment for the award of the degree of

BACHELOR OF ENGINEERING

IN

COMPUTER SCIENCE & ENGINEERING

Chandigarh University

Nov, 2025

BONAFIDE CERTIFICATE

Certified that this project report titled **"Expense Tracker"** is the bonafide work of **Dushyant**, who carried out the project work under my/our supervision.

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CHAPTER 1. INTRODUCTION

1.1 Introduction to Project

The Expense Tracker is a web-based application designed to help users efficiently manage their daily expenses. Built using Spring Boot for the backend and React for the frontend, the application provides a seamless user experience to record, view, update, and delete expense entries. MySQL is used as the database to store user expense data securely.

1.2 Identification of Problem

Many people struggle to keep track of their daily expenses, which leads to poor financial management and budgeting. Manual recording of expenses is time-consuming and prone to errors. This project aims to provide an easy-to-use digital solution to track expenses accurately and in real-time.

CHAPTER 2. BACKGROUND STUDY

2.1 Existing Solutions

There are several expense management apps available, but many are either too complex or lack customization for individual needs. Most applications focus on either mobile or desktop platforms but not both, and integration with secure backend services is sometimes limited.

2.2 Problem Definition

The problem is the absence of a simple, responsive, and reliable web application that allows users to perform basic CRUD operations on their expenses with a strong backend and persistent storage.

2.3 Goals/Objectives

- Develop a responsive web app using React for frontend and Spring Boot for backend.
- Use MySQL to persist expense data securely.
- Implement Create, Read, Update, and Delete (CRUD) operations for expenses.
- Provide a clean, user-friendly interface for expense management.

CHAPTER 3. DESIGN FLOW/PROCESS

3.1 System Architecture

The system follows a client-server architecture:

- Frontend: React.js provides the user interface and interacts with the backend via RESTful APIs.
- Backend: Spring Boot manages business logic and data processing.
- Database: MySQL stores expense records persistently.

Communication happens over HTTP with JSON as the data format.

3.2 Features

- User-friendly dashboard to view all expenses.
- Add new expense entries with details such as amount, date, and category.
- Edit existing expense entries to update information.
- Delete unwanted expense records.
- Persistent storage of data using MySQL.
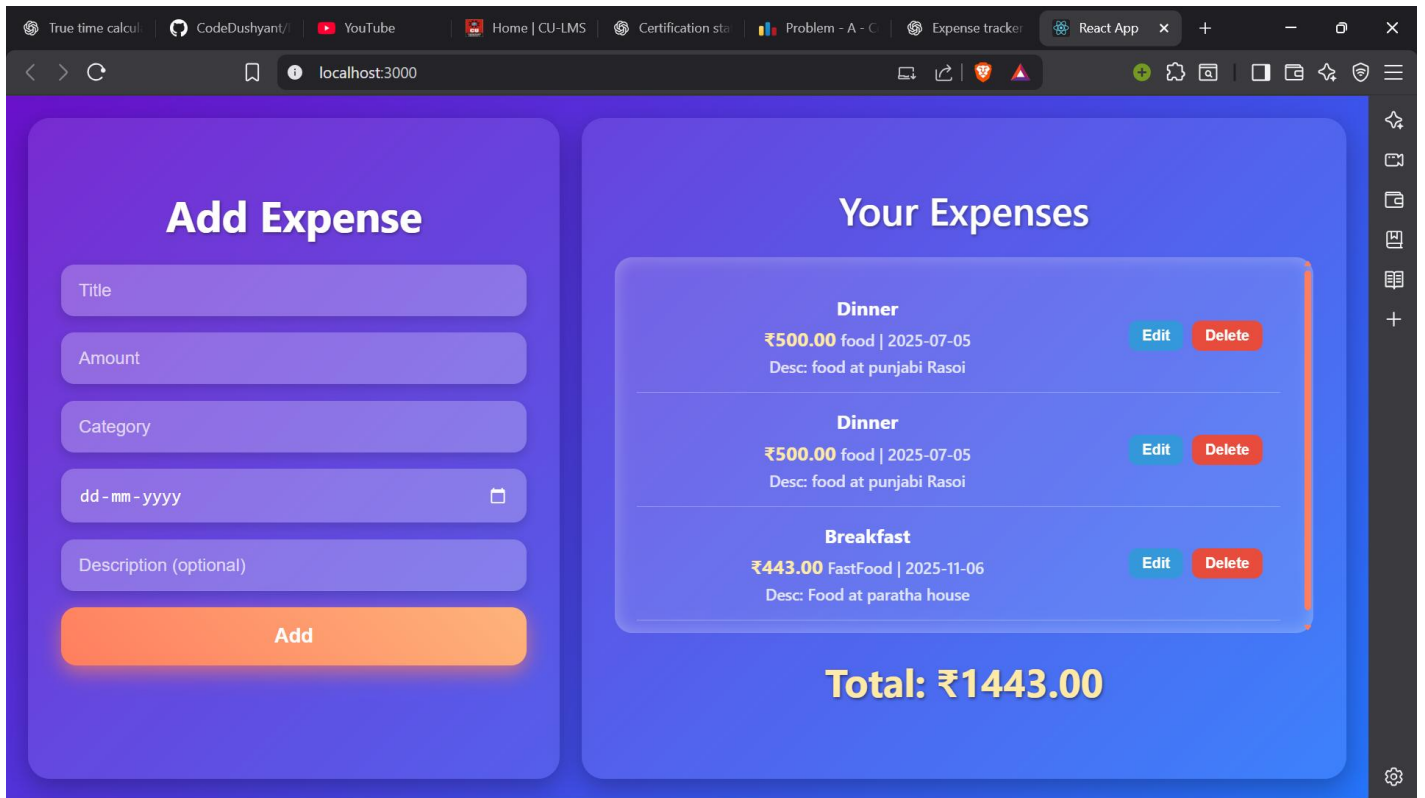- Real-time updates and responsive UI.

CHAPTER 4. IMPLEMENTATION

The application is implemented with:

- Frontend: React framework for building dynamic UI components and managing state. Axios library is used to make HTTP requests to backend APIs.
- Backend: Spring Boot application exposes REST endpoints to handle CRUD operations. Spring Data JPA is used to interact with the MySQL database.
- Database: MySQL stores all expense data in structured tables. The backend uses Hibernate ORM for object-relational mapping.
  The main CRUD operations implemented are:
- Create: Add new expense record via POST request.
- Read: Fetch all or specific expense records via GET request.
- Update: Modify existing expense details via PUT request.
- Delete: Remove expense record via DELETE request.

Add Expense

Title

Amount

Category

dd-mm-yyyy

Description (optional)

Add

Your Expenses

Dinner
₹**500.00** food | 2025-07-05
Desc: food at punjabi Rasoi

Edit   Delete

Dinner
₹**500.00** food | 2025-07-05
Desc: food at punjabi Rasoi

Edit   Delete

Breakfast
₹**443.00** FastFood | 2025-11-06
Desc: Food at paratha house

Edit   Delete

Total: ₹1443.00

CHAPTER 5. RESULTS ANALYSIS AND VALIDATION

The Expense Tracker application successfully performs all CRUD operations without data loss or inconsistency. The system was tested with multiple expense entries to verify data persistence and UI responsiveness. The integration between React frontend and Spring Boot backend through REST APIs works seamlessly. The MySQL database reliably stores and retrieves user data, ensuring data integrity.

CHAPTER 6. CONCLUSION AND FUTURE WORK

6.1 Conclusion

This project demonstrates the effective use of Spring Boot, React, and MySQL to build a full-stack Expense Tracker application. It provides users a simple yet powerful tool to manage expenses with real-time updates and persistent storage. The CRUD operations are implemented efficiently, providing a strong foundation for further enhancements.

6.2 Future Work

- Implement user authentication and authorization for secure multi-user access.
- Add advanced features such as expense categorization, reports, and charts.
- Introduce filtering and search functionality.
- Enable exporting expense data in CSV or PDF formats.
- Deploy the application on cloud platforms for wider accessibility.