# Summary of the Personal Finance Tracker Project

## **Project Overview:**

The "Personal Finance Tracker" is a web application aimed at helping users manage their finances by tracking income and expenses, categorizing them, and generating visual reports.

### **Technologies Used:**

Backend: Node.js, Express.js

Frontend: React.js

Database: MongoDB

Authentication: JSON Web Tokens (JWT)

Deployment: Heroku (web app), MongoDB Atlas (database)

## **Project Structure:**

The project is organized into backend and frontend directories, containing various setups for models, controllers, routes, and components for managing user authentication, expenses, and reporting.

### **Backend Implementation:**

Database Connection: Utilizes Mongoose to connect to MongoDB.

User Model: Defines user schema for authentication.

Auth Controller: Contains methods for user registration and login with password hashing and JWT generation.

Expense Model: Defines how expenses are recorded, linked to users.

Routes: Sets up API endpoints for handling authentication and expense management.

### **Frontend Implementation:**

Login Component: Handles user login, storing the JWT token in local storage.

Expense Form: Manages the submission of new expenses to the backend.

## **Documentation (README.md):**

Provides an overview, technologies used, installation instructions, features, and contribution guidelines. Steps for cloning the repository, setting up environment variables, and running both backend and frontend servers.

### **Deployment:**

The project can be deployed on Heroku for the backend and Netlify or Vercel for the frontend.

### **Educational Value:**

This project serves as a practical example for learning full-stack development, covering important aspects like REST APIs, user authentication, and database interactions. It is designed for further expansion based on specific user needs.