**System Requirements Specification (SRS)**

**1. Introduction**

* **Purpose**:  
  This document provides a comprehensive description of the system requirements for the Personal Expense Tracker project. It is intended to serve as a reference for developers, testers, and stakeholders, ensuring the project aligns with expected functionalities and standards.
* **Scope**:  
  The system is a web-based application designed to help users manage and visualize personal expenses. It allows users to log daily expenses, categorize transactions, and analyze spending patterns over time.
* **Definitions**:
  + **Expense**: A financial transaction recorded by the user.
  + **Category**: Classification for expenses (e.g., Food, Utilities, Entertainment).
  + **Report**: A summary or visualization of spending data over time.

**2. Overall Description**

* **Product Perspective**:  
  The Personal Expense Tracker is a standalone web application. Data is stored locally on the user's device, allowing for personal tracking and analysis without reliance on external databases.
* **User Characteristics**:
  + Individual consumers who seek to monitor daily expenses.
  + Basic familiarity with web applications is expected.
* **Constraints**:
  + Data is stored locally on the device, dependent on browser local storage.
  + Designed for single-user functionality only.
  + Requires an internet connection to access the web-based application.
* **Dependencies**:
  + **Browser Compatibility**: The application should operate on modern web browsers.
  + **Recharts Library**: Used for visualization of spending patterns.
  + **Local Storage**: Utilized for data persistence across sessions.

**3. Functional Requirements**

* **Expense Tracking**:
  + Users shall be able to log individual expenses, capturing details such as amount, category, description, and date.
  + Users shall be able to delete previously recorded expenses.
* **Categorization**:
  + Users shall assign a category (e.g., Food, Transport) to each expense.
  + The system shall allow users to add custom categories beyond predefined ones.
* **Reporting**:
  + Users shall be able to view summaries of expenses by month and year.
  + Users shall visualize monthly spending patterns through bar charts generated using Recharts.

**4. Non-Functional Requirements**

* **Usability**:
  + The interface shall be intuitive, user-friendly, and responsive across various devices.
  + Forms and inputs shall include clear instructions and validation mechanisms to assist the user.
* **Performance**:
  + The application shall load within 2 seconds under typical conditions.
  + Charts and summaries shall update within 1 second after a new data entry or deletion.
* **Reliability**:
  + Data in local storage shall persist across sessions unless the browser cache is cleared.
  + The application shall be accessible at any time through a browser.
* **Security**:
  + Data is stored locally, with no sensitive data processing.
  + No external database connection is used in this version.