# Testing Documentation

**1. Testing Overview**

This document outlines the testing strategy for the **Personal Expense Tracker** application, covering unit testing, integration testing, and performance testing to ensure functionality, stability, and responsiveness.

**2. Unit Tests**

* **Purpose**: To validate individual functions and components to ensure they work as expected.
* **Examples**:
  + Testing functions for adding, deleting, and categorizing expenses.
  + Validating user input handling in forms.
* **Location**: tests/unit\_tests/

**3. Integration Tests**

* **Purpose**: To ensure that various components of the application work together seamlessly.
* **Examples**:
  + Testing interactions between the application interface and local storage.
  + Validating data flow through the Recharts library for accurate data visualization.
* **Location**: tests/integration\_tests/

**4. Performance Testing**

* **Goal**: To evaluate the application’s responsiveness and ability to handle high loads.
* **Focus Areas**:
  + Assess response time when adding multiple expenses in quick succession.
  + Evaluate the rendering speed of data visualizations, particularly under larger datasets.
* **Results**: Graphs and response time metrics should be included if available to illustrate performance benchmarks.