Basic Expense Tracker - Design/Usage Documentation

Overview

This Basic Expense Tracker is a web application designed to help users track their daily expenses. It allows users to:
1. Add expense entries by specifying **date**, **category** and **amount**
2. Visualising spending trends using an interactive chart
3. Manage expense data in a table with options to delete entries and **export** data via CSV files.

The entire application is built base on HTML, CSS and JavaSCript with a focus on accessibility, responsiveness and user friendly design

Features

1. **Add Expense Form**
   - Fields for date, category (dropdown) and amount
   - Button to add expenses dynamically updates the chart and table.
2. **Spending Chart:**
   - A bar chart (powered by Chart.js) displays total spending over time.
3. **Expense List Table:**
   - Displays all expense entries in a tabular format.
   - Includes options to delete entries and export the table to a CSV file.
4. **CSV Export:**
   - Users can export the current data.
5. **Responsive Design:**
   - Optimized for mobile (portrait and landscape), tablet, and desktop views.
6. **Accessibility:**
   - Labels on form fields and accessible button roles.
   - Ensures compatibility with assistive technologies.

Design Principles

1. **Mobile-First Design:**

- The application layout is designed to adapt to different screen sizes, starting with mobile views.
2. **Row-Column Grid Structure:**
   - Form, chart, and table sections are organized into a flexible grid for seamless alignment across devices
3. **User Centric Design:**
   - Focused on simplicity and ease of navigation for users.

How It works

Adding Expenses:
- Users fill out the form and click the "Add Expense" button.
- The application validates inputs and adds the expense to the list, updates the chart, and refreshes the table.

Viewing Spending Trends:
- The chart automatically updates to reflect the total spending grouped by date.

Managing Expenses:
- Users can delete entries directly from the table.
- Expense data can be exported as a CSV file.

Technical Implementation

Frontend:

- HTML5 for semantic structure.
- CSS3 for styling (with modular components like buttons, tables, and forms).
- Chart.js for dynamic chart rendering.

JavaScript Modules:

- FormComponent.js: Handles adding expenses.
- ChartComponent.js: Updates the spending chart.
- TableComponent.js: Manages the expense list and CSV export.
- ExpenseService.js: Maintains the list of expenses and triggers updates.

Responsive Design:

- Media queries ensure the layout adapts to different screen sizes.
- Buttons and text are scaled appropriately for usability.

Accessibility:

- Input fields have labels for screen readers.
- Buttons and links follow ARIA roles.

Tools and Frameworks

1. **Bootstrap**: For grid layout and responsive design.
2. **Chart.js**: For data visualization.
3. **Custom CSS**: For styling and theming.

Conclusion

The Basic Expense Tracker is a lightweight, responsive, and accessible web application that simplifies personal expense tracking. Its modular design, CSV export functionality, and spending visualization chart make it a practical tool for daily use.