

Expense Tracker

Overview

An expense tracking application where users can register and log in to manage their personal expenses. Each user can add, edit, delete, and categorize their expenses. The app should display a breakdown of expenses by category, and users should be able to visualize their spending with graphs or charts.

Requirements

1. Authentication

- **User Authentication:**
 - Users can sign up and log in using Firebase Authentication (email/password).
 - After login, users can add and manage their own expenses, which are stored in Firestore.

2. Expense Management

- **Add Expense:**
 - Users can add a new expense with the following details:
 - Title (e.g., "Groceries", "Rent")
 - Amount (number, in user's preferred currency)
 - Category (e.g., "Food", "Transport", "Bills", "Education", "Investments", "Luxuries", "Other".)
 - Date (default to the current date)
 - Optional Note (a text field for additional details)
- **Edit/Delete Expense:**
 - Users can view their list of expenses and edit or delete any expense.

3. Firestore Database Structure

- **Expenses Collection:**
 - Each user has a collection of expenses.

Structure in Firestore:

json

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```
{  
  "userId": "User's Firebase UID",  
  "title": "Groceries",  
  "amount": 50.0,
```

```
"category": "Food",  
"date": "2024-09-25T00:00:00Z",  
"note": "Bought fruits and vegetables"  
}
```

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4. Expense List

- **Display Expenses:**
 - Show a list of all the user's expenses.
 - Allow filtering by date range and category.
- **Expense Summary:**
 - Display the total amount spent per month.
 - Show a breakdown of expenses by category (e.g., a table and a pie chart).

5. Charts and Data Visualization

- Use a chart library like `Chart.js` to provide visual insights into user spending.
- **Pie Chart:**
 - Show the percentage of spending in each category (e.g., Food, Rent, Transport).
- **Bar Chart:**
 - Show total monthly expenses over the past 6 months.

6. Real-time Updates

- **Real-time Expense Updates:**
 - Ensure that when users add, edit, or delete an expense, the changes are reflected immediately in the UI using Firestore's real-time listeners.

8. Optional Features

- **Recurring Expenses:**
 - Implement a feature to add recurring expenses (e.g., rent or subscription services) that automatically appear each month.