

Side-Project Ideas for .NET Developers

Personal Finance Tracker

Personal Finance Tracker

- Overview
- Categorise
- Categories: Budgets
- Reports

Overview

Total Balance **\$8,750**

Monthly Income **\$5,000**

Monthly Expenses **\$3,200**

Recent Transactions

Date	Description	Category
2024-04-20	Salary	Income
2024-04-10	Groceries	Food
2024-04-15	Rent	Housing
2024-04-10	Restaurant	Dining
2024-04-05	Salary	-\$50.00

Spending by Category

Food Housing Other

Income vs. Expenses

Recent Transactions

+5.000	Income
- 120.00	-\$120.0
-1,500.00	\$1,500.0
- 50.00	-\$50.0

May Jun Jul Sep Sep Oct Nov Apr

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Personal Finance Tracker

You can track income and expenses, assign categories, and see spending trends.

You get dashboards with charts, monthly summaries, and a clean view of where your money goes.

We create separate endpoints for transactions, categories, budgets, and reports.

Each module handles its own logic, transactions know how to calculate totals, reporting knows how to aggregate data.



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Tech Stack

Backend:

ASP .NET 8 Web API hosted on Azure App Service

Frontend:

React dashboards with Chart.js

Architecture:

Modular Monolith

Database:

Neon Postgres

Deployment:

Azure App Service

Azure Static Web App



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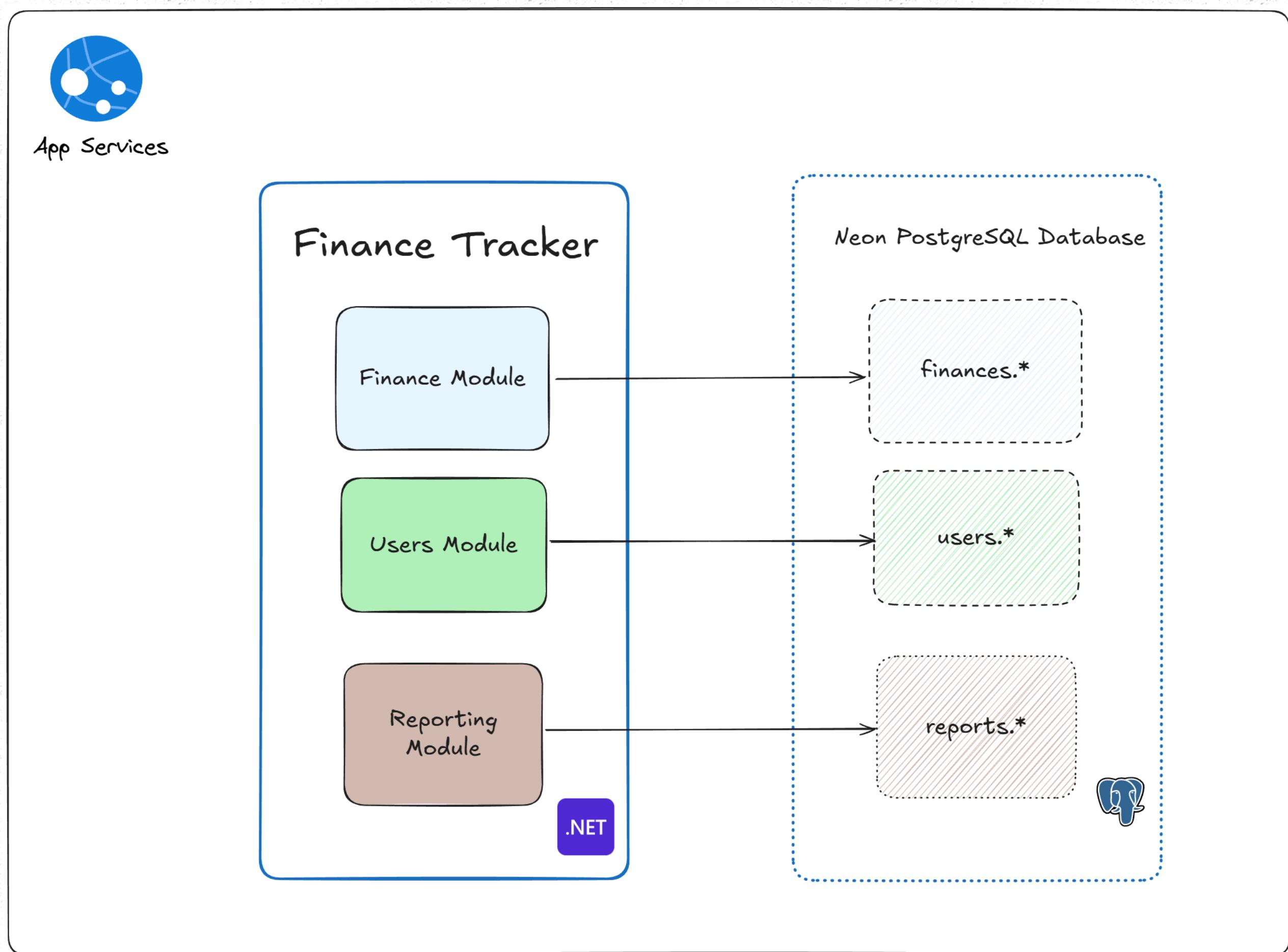


Architecture: Modular Monolith

Finance Module → transactions, categories, budgets

Users Module → user management and authentication

Reporting Module → aggregations for dashboards



Backend

Here is what we will use:

- Minimal APIs
- EF Core
- FluentValidation
- Scheduling with TickerQ
- Observability with OpenTelemetry
- Integration Tests with xUnit and TestContainers



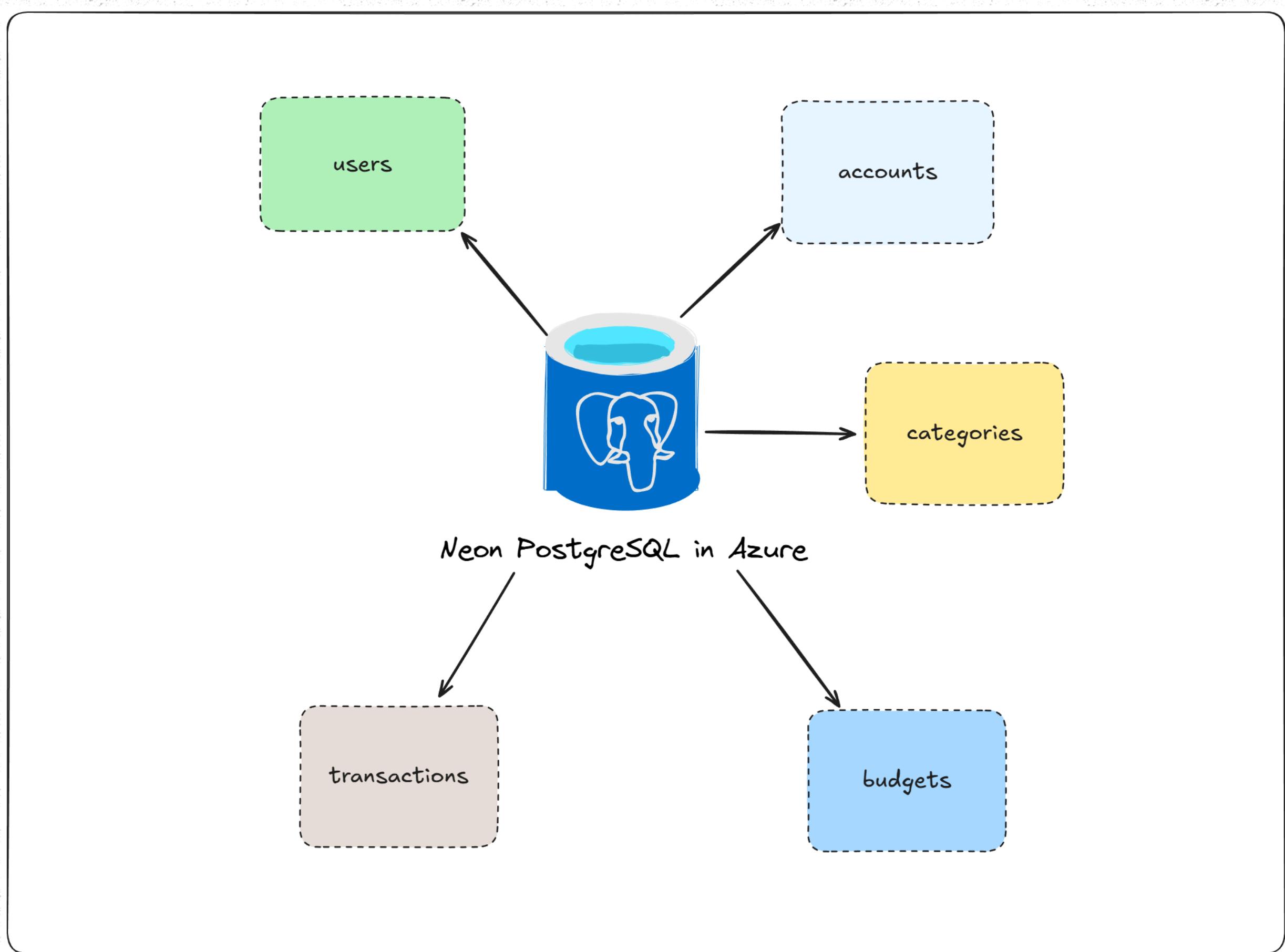
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Database

Neon is perfect here because:

- Autoscaling
- Generous free tier
- Serverless architecture
- Fully compatible with EF Core Npgsql package



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Frontend

The UI has 4 main parts:

1. Overview dashboard
2. Transactions page
3. Categories and budgets
4. Reports with charts

React Query handles data fetching.

React Hook Form handles validation.

Chart.js shows spending trends and income vs expenses.



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Frontend: UI concept

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- Categories: Budgets
- Reports

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Spending by Category

Legend: Food (Blue), Housing (Orange), Other (Green)

Income vs. Expenses

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Deployment

Azure App Service + Azure Static Web Apps

The backend runs on Azure App Service →
easy deploy, environment variables, scaling,
SSL.

The frontend runs on Azure Static Web Apps
→ global CDN, cheap, clean CI/CD.

GitHub Actions builds and deploys both
automatically.



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Project Template

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