Terminal GUI MAUI

A cross-platform .NET MAUI application providing a clean and efficient user interface for managing product data, including adding, editing, deleting, validating, and exporting product lists.
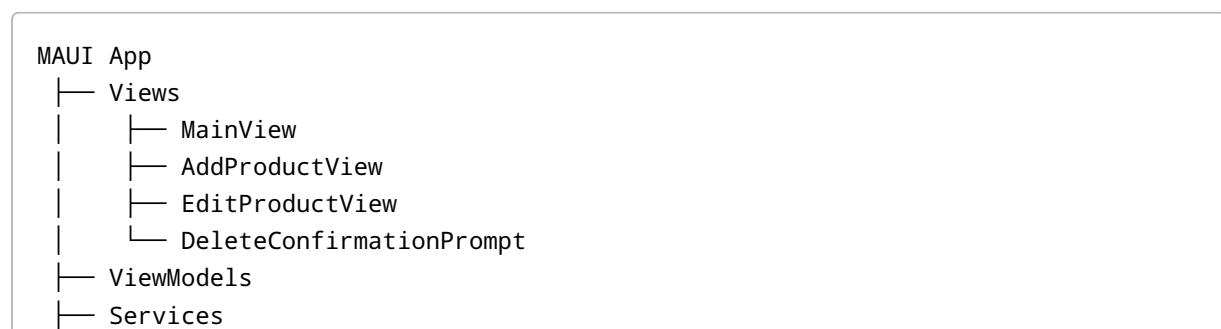
Table of Contents

Overview

Terminal GUI MAUI is a lightweight management application designed for simplicity and efficiency. It allows users to manage a product list stored in a local SQLite database with full CRUD support and CSV exporting.

Features

- Add, edit, and delete products
- Input validation for every field
- Local SQLite storage
- CSV export functionality
- Real-time logs displayed in UI
- Modular service-based architecture

Architecture

```
MAUI App
├── Views
│      ├── MainView
│      ├── AddProductView
│      ├── EditProductView
│      └── DeleteConfirmationPrompt
├── ViewModels
├── Services
```

```
|         └── DatabaseService
├── Models
│       └── Product
└── Utilities
```

UI Views

Main View

- Product list display
- Buttons: Add Product, Edit, Delete, Export CSV
- Real-time LogBox for status and errors

Add Product View

- Input fields: Name, Price, Quantity, Category
- Validation for all fields

Edit Product View

- Pre-filled product data
- Same validation as AddProduct

Delete Confirmation Prompt

- Simple Yes/No confirmation dialog

Data Model

```
Product
 ├── int Id
 ├── string Name
 ├── decimal Price
 ├── int Quantity
 └── string Category
```

Database Service

Responsible for initializing database, seeding data, and performing CRUD operations.

```
Methods:
- Initialize()
- GetProductsAsync()
- AddProductAsync()
```

```
- UpdateProductAsync()
- DeleteProductAsync()
```

User Flow

1. User opens the app
2. MainView displays all products
3. User adds/edits/deletes items
4. Database updates accordingly
5. Logs show success or error messages

Screenshots

(Replace placeholders with actual images) - Main View - Add Product Popup - Edit Product Popup - Delete Confirmation

Installation

1. Install .NET 8 SDK
2. Clone the repository
3. Restore dependencies:

```
dotnet restore
```

Build & Run

```
dotnet build
```

Run MAUI app on preferred device or emulator.

Roadmap

- Cloud sync
- Dark/Light theme switcher
- Unit tests
- Multi-language support

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