CLI-focused guide to creating **different types of Blazor applications** using the **dotnet CLI**, aligned with **.NET 8 / .NET 9 style Blazor**.

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1. Prerequisites

Verify that the .NET SDK is installed:

dotnet --version

To see available Blazor templates:

dotnet new list blazor

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2. Blazor Web App (Recommended – .NET 8+)

This is the **modern unified Blazor model** that supports **Server, WebAssembly, and Auto render modes** in a single project.

Create Blazor Web App

dotnet new blazor -n BlazorWebApp

cd BlazorWebApp

dotnet run

Key Characteristics

- Supports **InteractiveServer**, **InteractiveWebAssembly**, and **Auto**

- Default template for new Blazor development

- Uses **Razor Components**

- Ideal for production apps

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3. Blazor Web App with Specific Render Mode

Interactive Server (SignalR-based)

dotnet new blazor -n BlazorServerApp --interactivity Server

Interactive WebAssembly

dotnet new blazor -n BlazorWasmApp --interactivity WebAssembly

Auto (Server → WASM fallback)

dotnet new blazor -n BlazorAutoApp --interactivity Auto

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4. Blazor Server App (Legacy Style – Pre .NET 8)

This template still exists but is **not recommended** for new apps unless required.

dotnet new blazorserver -n BlazorServerLegacy

Characteristics

- Always connected via **SignalR**

- No WebAssembly

- Tight server dependency

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5. Blazor WebAssembly App (Standalone SPA)

dotnet new blazorwasm -n BlazorWasmStandalone

With ASP.NET Core Hosted Backend

dotnet new blazorwasm -n BlazorWasmHosted --hosted

This creates:

- **Client** (Blazor WASM)

- **Server** (API + hosting)

- **Shared** (DTOs)

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6. Blazor WebAssembly PWA

dotnet new blazorwasm -n BlazorPwa --pwa

Features

- Offline support

- Installable as desktop/mobile app

- Service workers enabled

7. Blazor WebAssembly with Authentication

dotnet new blazorwasm -n BlazorAuthApp --auth Individual

Other auth options:

- None

- Individual

- SingleOrg

- MultiOrg

8. Blazor Hybrid (.NET MAUI)

For desktop/mobile apps using Blazor UI.

dotnet new maui-blazor -n BlazorHybridApp

Runs on:

- Windows

- Android

- iOS

- macOS

9. Running the Application

dotnet restore

dotnet build

dotnet run

For WASM:

dotnet run --project Client

10. Summary Table

App Type	CLI Template	Best Use Case
Blazor Web App	dotnet new blazor	Modern full-stack apps
Blazor Server (legacy)	dotnet new blazorserver	Real-time, intranet
Blazor WASM	dotnet new blazorwasm	SPA, client-heavy apps
WASM Hosted	--hosted	SPA + API
PWA	--pwa	Offline-first apps
Hybrid	maui-blazor	Desktop & mobile