Blazor, running .NET apps in the browser

Blazor a framework for building interactive client-side web UI with .NET

I am Linda Lawton

25+ years of backend development experience.

You can find me at @LindaLawtonDk

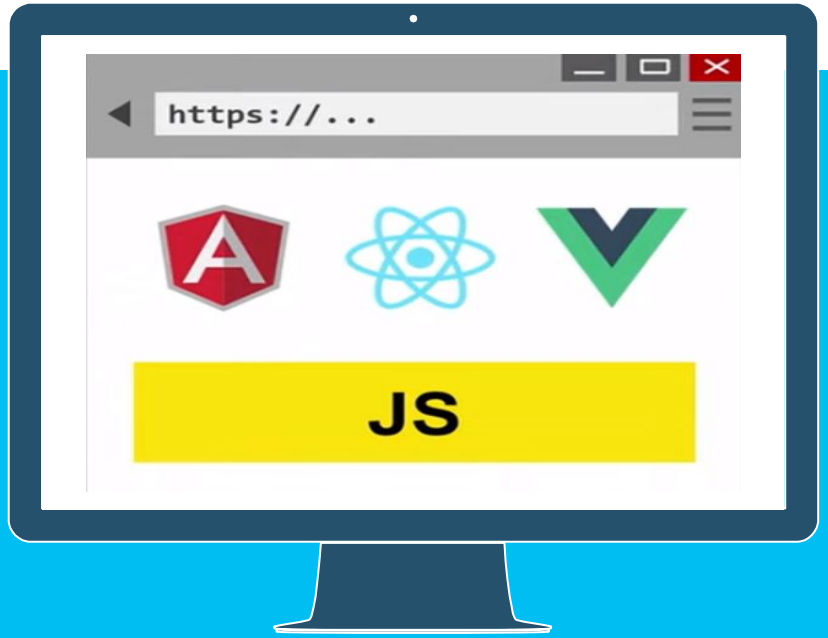
www.Daimto.com

SERVER SIDE

Show and explain your web, app or software projects using these gadget templates.

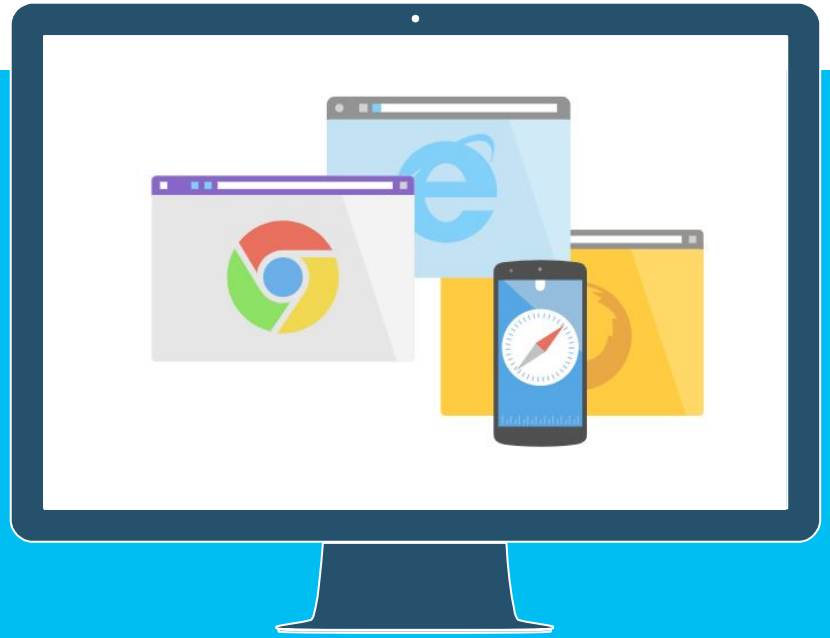
CLIENT SIDE

JavaScript had a monopoly on client side (angular, react ..)



Built on open web standards

Blazor uses open web standards without plugins or code transpilation. Blazor works in all modern web browsers, including mobile browsers.



1.

How does blazor look

Show me the code.

It’s all about components


```
1   <h1 style="font-weight: bold">@HeadingText</h1>
2
3   @code {
4       [Parameter]
5       public string HeadingText { get; set; } = "Shoping List";
6   }
```

A component is a self-contained chunk of user interface (UI), such as a page, dialog, or form.

C# code mixed with HTML


```
1  <ul>
2  @foreach (var item in Items)
3  {
4      <li>@item</li>
5  }
6  </ul>
7
8  @code {
9      [Parameter]
10     public List<string> Items { get; set; }
11 }
```

In the `@code` block, component state (properties, fields) is specified with methods for event handling or for defining other component logic.

EventCallBack from child to parent


```razor
<input type="text" @bind="@Item" />
<button class="btn btn-primary" @onclick="@OnClickInternal">@ButtonText</button>

@code {
    [Parameter]
    public string ButtonText { get; set; } = "Submit";
    [Parameter]
    public string Item { get; set; }
    [Parameter]
    public EventCallback<string> OnClick { get; set; }
    async Task OnClickInternal()
    {
        // verify that the delegate associated with this event dispatcher is non-null
        if (OnClick.HasDelegate)
        {
            await OnClick.InvokeAsync(Item);
        }
    }
}
```

Events

You can define your events in the child and have the event sent back to the parent for handling.

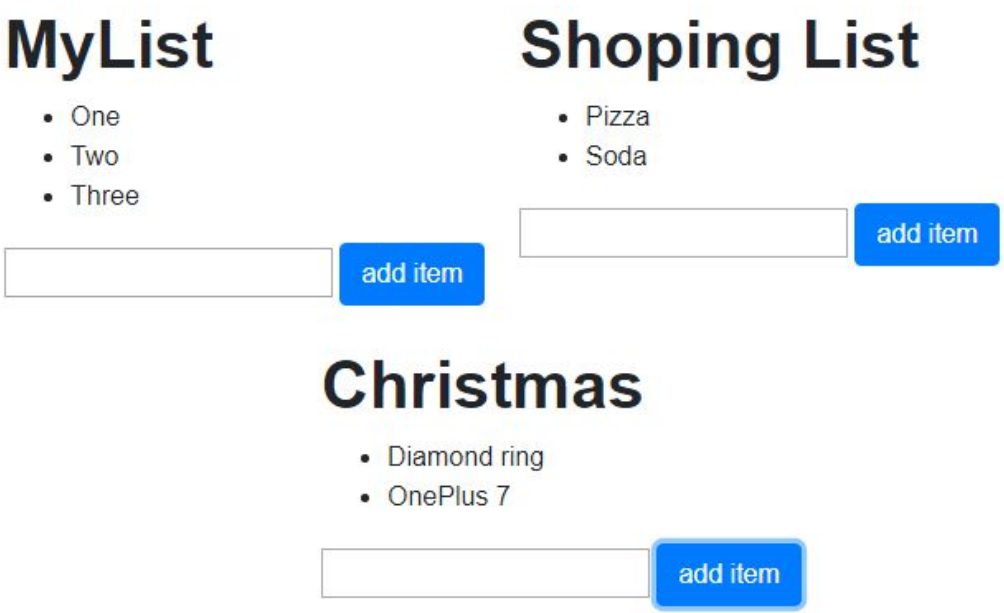
Components are reusable


```
1   @page "/Lists"
2   @using  BlazorListPreview9.Components;
3   <ShowList  />
4   <ShowList HeadingText="Shoping List"  />
5   <ShowList HeadingText="Christmas" />
6
```

Due to the fact that everything is component based. It makes for simple reusability of your code.

By creating once Show List component and simply sending a different heading I can have three separate lists displayed using the sample code.

Three lists for the price of one



>Dotnet pack
>dotnet nuget publish

Publish to NuGet

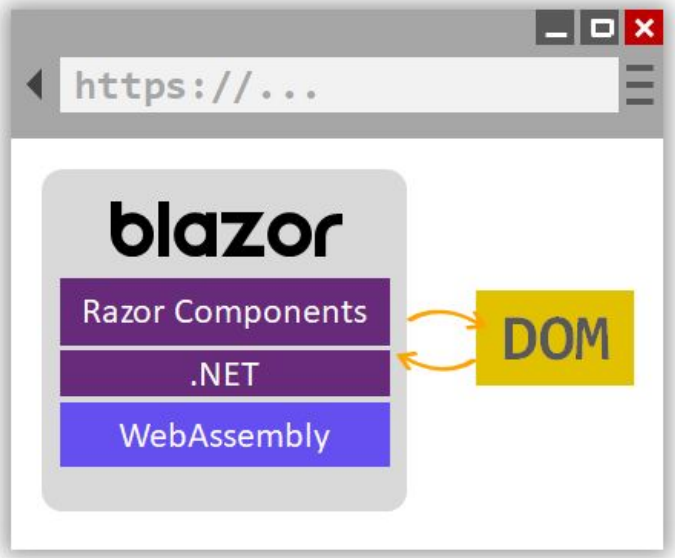
Because component libraries are standard .NET libraries, packaging and shipping them to NuGet is no different from packaging and shipping any library to NuGet.

2.

So what's really going on?

Its client side.

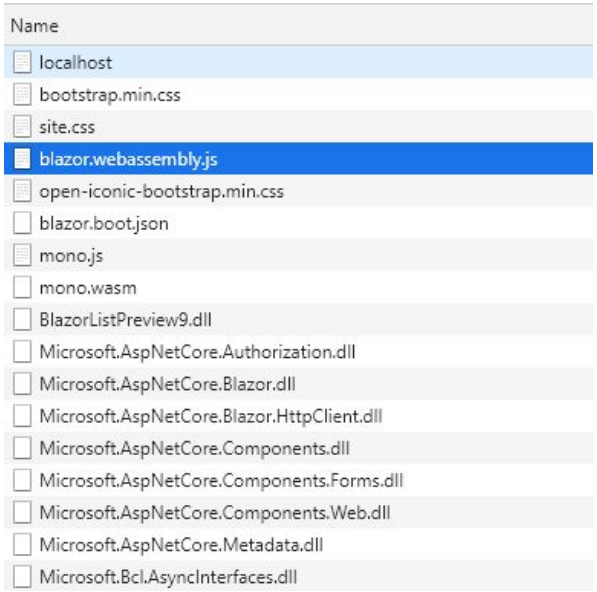
Blazor WebAssembly app is built and run in a browser



Behind the scenes

- C# code files and Razor files are compiled into .NET assemblies.
- The assemblies and the .NET runtime are downloaded to the browser.
- Blazor WebAssembly bootstraps the .NET runtime and configures the runtime to load the assemblies for the app. The Blazor WebAssembly runtime uses JavaScript interop to handle DOM manipulation and browser API calls.

Loading .net dlls in the browser.



Chrome debug

If you disable cache in Chrome deuber and check the network tab you can see exactly whats going on.

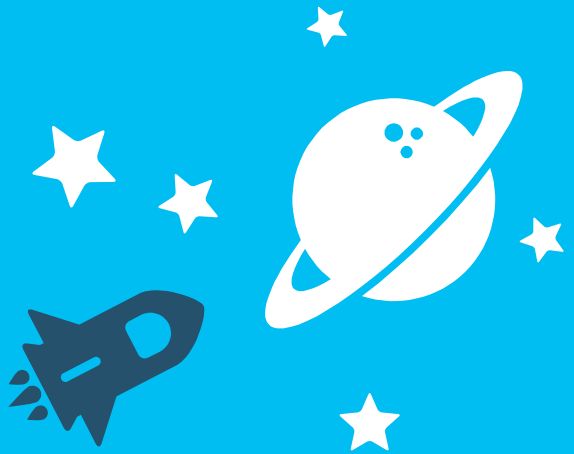
Blazor.webassembly.js is a small chunk of javascript that knows how to load Mono.

Mono.wasm is the mono web assembly runtime starting up.

All your dlls then load.

Space

Currently 2.5 mb of .net dlls are loaded.



Trying blazor

What you need to run Blazor:

- .net core 3.0 sdk latest and greatest
- Visual Studio 2019 Preview
- `dotnet new -i Microsoft.AspNetCore.Blazor.Templates::3.0.0-preview9.19424.4`

Find Help here:

https://docs.microsoft.com/en-us/aspnet/core/blazor/

https://stackoverflow.com/questions/tagged/blazor

Where to find me

Linda Lawton:

- Twitter: @LindaLawtonDk
- GitHub: https://github.com/LindaLawton
- Blog: https://daimto.com

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