Xamarin

**Training**:

Quickstart for Xamarin.Forms in general(a little more than hello world): [Create a Xamarin.Forms application quickstart - Xamarin | Microsoft Docs](https://docs.microsoft.com/en-us/xamarin/get-started/quickstarts/app?pivots=macos)

Video Resources: [Learn Xamarin | Free tutorials, courses, videos, and more (microsoft.com)](https://dotnet.microsoft.com/learn/xamarin)

Self Guided: [Build mobile apps with Xamarin.Forms - Learn | Microsoft Docs](https://docs.microsoft.com/en-us/learn/paths/build-mobile-apps-with-xamarin-forms/)

Prism with Xamarin Forms:  [Prism in Xamarin Forms Step by Step (Part. 1) - XamGirl](https://xamgirl.com/prism-in-xamarin-forms-step-by-step-part-1/)

Outside Microsoft Resources:

**Pluralsight** : Skill path -> [Building Cross-platform Apps with Xamarin Forms | Pluralsight](https://www.pluralsight.com/paths/building-cross-platform-apps-with-xamarin-forms)

**Other good watches discussing things coming up and capabilities:**

[Building Amazing Things from Simple Things | MonkeyFest USA 2020 - YouTube](https://www.youtube.com/watch?v=YHx96f_Ulw4) (Kym Phillpotts is a great resource for training classes as well as whats possible with Xamarin forms)

<https://www.youtube.com/watch?v=9kwrgm_-FCk>. This discusses .Net Maui and incorporation of MVU from James Clancey another key member of the development team

This is WAY more that I should provide to get you started or you can cover this weekend but checkout the quickstart and possibly the Self guided above, that should be plenty to get your feet wet. And also look at the XamGirl Prism guide to understand the Prism framework with Xamarin.

Create a Xamarin.Forms application quickstart - <https://docs.microsoft.com/en-us/xamarin/get-started/quickstarts/app?pivots=windows>

(This article explains how to create a Xamarin.Forms Shell application, which reduces the complexity of mobile application development by providing the fundamental features that most mobile applications use)

**Laxmi’s Journey:**

**Good starting point of Xamarin Overview:** <https://app.pluralsight.com/course-player?clipId=54c53284-8014-4fb7-bfa1-7dc9753dfb8d>

Diagram

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* **Xamarin.Forms Visual Editing**
  + ~~XAML Previewer (deprecated)~~
  + XAML Toolbox
    - View -> Toolbox
  + Hot Reload (available in Visual Studio 2019 version 16.3+)
  + ~~Xamarin Hot Restart? (Available in VS 2019)~~

**Follow through Microsoft documentation:** <https://docs.microsoft.com/en-us/xamarin/get-started/first-app/?pivots=windows> (start with Installation + First App)

* **Start here:** <https://docs.microsoft.com/en-us/learn/paths/build-mobile-apps-with-xamarin-forms/>

**Templates:**

* <https://www.syncfusion.com/essential-xamarin-ui-kit>
* <https://www.youtube.com/watch?v=V71tYEht9cU> (watch this)
* <https://www.youtube.com/watch?v=AugZail5aBY>
* **Good looking UI templates**: <https://github.com/jsuarezruiz/xamarin-forms-goodlooking-UI>

**Authentication & Authorization using IdentityServer4:**

* <https://docs.microsoft.com/en-us/xamarin/xamarin-forms/enterprise-application-patterns/authentication-and-authorization>
* **XF + IS4:** <https://www.puresourcecode.com/dotnet/net-core/authentication-in-xamarin-forms-with-identityserver/?amp>
  + **Sample:** <https://github.com/IdentityModel/IdentityModel.OidcClient.Samples/tree/main/XamarinForms>

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**MVVM Pattern:** <https://docs.microsoft.com/en-us/xamarin/xamarin-forms/enterprise-application-patterns/mvvm>

**Questions:**

1. Is there a Xamarin.Forms Designer? Like Android studio Layout Editor -- **NO**

2. Is there a preferred template library? Like bootstrap. I ran into <https://www.syncfusion.com/essential-xamarin-ui-kit> (looks expensive) – **Can use this till we hit $1M in revenue**

3. Looks like Prism is great, but do you know if MAUI will have something like this built in? The fact that this Library is maintained by two developers concerns me.

Also, .NET Core has in built Dependency Injection. Not sure how much of this will be going away - **.NET MAUI is going to replace Prism**

**Best Resources:**

(Gill Cleeren)

Xamarin Big Picture: <https://app.pluralsight.com/course-player?clipId=62c87116-9569-47a8-aa2c-97feaa7fd528>

Xamarin.forms Deep dive with demo: <https://app.pluralsight.com/course-player?clipId=0cceb502-bf6c-40e2-b4bb-9d7735a80edc>

Xamarin Data binding: <https://app.pluralsight.com/course-player?clipId=7ef116fe-6552-4970-8ef2-0734cbe3883b>

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Enterprise Application best practices: <https://app.pluralsight.com/library/courses/xamarin-forms-enterprise-mobile-application/description> (use this architecture with MVVM for enterprise apps)

* Xamarin Mobile App Architecture: <https://snowball.be/wp-content/uploads/2017/10/Xamarin-MVVM-Microservices.pdf>
* Youtube Video: <https://www.youtube.com/watch?app=desktop&v=d95DbeodRk8> Table

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UI Toolkit Nuget package: <https://marketplace.visualstudio.com/items?itemName=SyncfusionInc.Essential-UI-Kit-Xamarin-Forms>

**Libraries going to be used:**

* **MVVM** architecture
  + Models here are DTO’s
  + View’s are XAML View Pages
    - Minimize code behind for clean architecture
    - Instead use VM’s
  + View Models
    - Contains state
    - And operations (implemented using commands)
    - View models controls/decides flows
    - To separate View Models from interacting with UI components use NavigationService
* **Autofac** for Dependency injection
  + Constructor injection
  + Testability & maintainability is the key here
* **ACR** -> Dialogs
* **Akavache** for Caching
  + Call services externally only when required
* **Xamarin.Forms MessagingCenter** (for communication b/w view models)
  + To promote loose coupling, use messaging for communication between VM’s
* **Polly** for retries