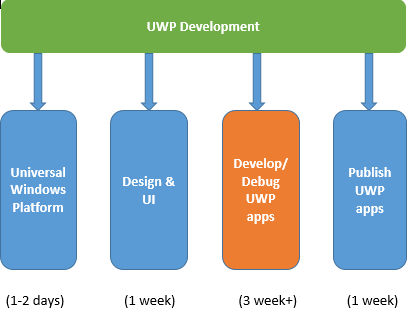
## UWP Readiness

## UWP Development Architecture



## Topic-I: Universal Windows Platform(Level 100)

##### 1.[What's a Universal Windows Platform (UWP) app](https://msdn.microsoft.com/en-us/windows/uwp/get-started/whats-a-uwp)

##### 2.[Guide to Universal Windows Platform (UWP) apps](https://msdn.microsoft.com/en-us/windows/uwp/get-started/universal-application-platform-guide)

##### 3.[Environment Setup](https://developer.microsoft.com/en-us/windows/downloads)

* [Get set up for UWP Development](https://developer.microsoft.com/en-us/windows/downloads/windows-10-sdk)
* [Enable your device for development](https://msdn.microsoft.com/en-us/windows/uwp/get-started/enable-your-device-for-development)
* [Microsoft Emulator for Windows 10 Mobile](https://msdn.microsoft.com/en-us/windows/uwp/debug-test-perf/test-with-the-emulator)
* [SignUP the Develop Account](https://msdn.microsoft.com/en-us/windows/uwp/get-started/sign-up)

##### 4.[Plan your app](https://msdn.microsoft.com/en-us/windows/uwp/get-started/plan-your-app)

## Topic-II: Design & UI(Level 100-150)

##### 1.[Layout](https://msdn.microsoft.com/en-us/windows/uwp/layout/index)

##### I. [App Layout](https://msdn.microsoft.com/en-us/windows/uwp/layout/index)

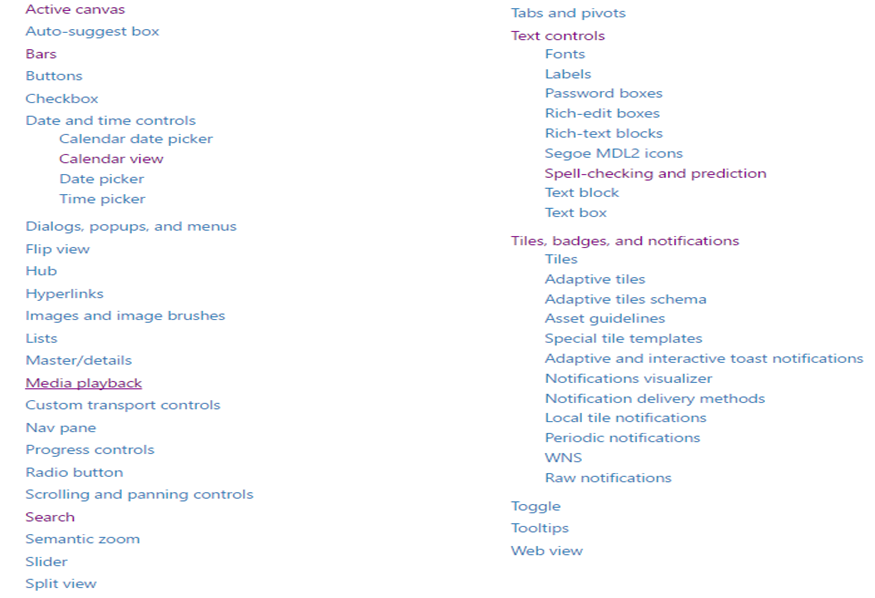
* [Navigation basics](https://msdn.microsoft.com/en-us/windows/uwp/layout/navigation-basics)
* [Command basics](https://msdn.microsoft.com/en-us/windows/uwp/layout/commanding-basics)
* [Content basics](https://msdn.microsoft.com/en-us/windows/uwp/layout/content-basics)

##### II. [Page Layout](https://msdn.microsoft.com/en-us/windows/uwp/layout/index)

* [Layout panels](https://msdn.microsoft.com/en-us/windows/uwp/layout/index)
* [Alignment, margins, and padding](https://msdn.microsoft.com/en-us/windows/uwp/layout/alignment-margin-padding)
* [Define layouts with XAML](https://msdn.microsoft.com/en-us/windows/uwp/layout/layouts-with-xaml)
* [Screen sizes and breakpoints](https://msdn.microsoft.com/en-us/windows/uwp/layout/screen-sizes-and-breakpoints-for-responsive-design)

##### 2.[Controls & Patterns](https://msdn.microsoft.com/en-us/windows/uwp/controls-and-patterns/index)

* [Index of controls by function](https://msdn.microsoft.com/en-us/windows/uwp/controls-and-patterns/controls-by-function)
* [Specific controls and patterns](https://msdn.microsoft.com/en-us/windows/uwp/controls-and-patterns/index)



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##### 3.[Style](https://msdn.microsoft.com/en-us/windows/uwp/style/index)

* [XAML Control templates](https://msdn.microsoft.com/en-us/windows/uwp/controls-and-patterns/control-templates)
* [ResourceDictionary and XAML resource references](https://msdn.microsoft.com/en-us/windows/uwp/controls-and-patterns/resourcedictionary-and-xaml-resource-references)
* [XAML theme resources](https://msdn.microsoft.com/en-us/windows/uwp/controls-and-patterns/xaml-theme-resources)

##### 4.[Animation & Transition](https://msdn.microsoft.com/en-us/windows/uwp/style/motion)

* [Animation OverView](https://msdn.microsoft.com/en-us/windows/uwp/graphics/animations-overview)
* [Transform overview](https://msdn.microsoft.com/en-us/windows/uwp/graphics/transforms-overview)
* [Visual layer](https://msdn.microsoft.com/en-us/windows/uwp/graphics/visual-layer)

##### 5.[Graphics](https://msdn.microsoft.com/en-us/windows/uwp/graphics/index)

* [Draw shapes](https://msdn.microsoft.com/en-us/windows/uwp/graphics/drawing-shapes)
* [Use brushes](https://msdn.microsoft.com/en-us/windows/uwp/graphics/using-brushes)

##### 6.[Globalization and localization](https://msdn.microsoft.com/en-us/windows/uwp/globalizing/globalizing-portal)

* [Format dates and times](https://msdn.microsoft.com/en-us/windows/uwp/globalizing/use-patterns-to-format-dates-and-times)
* [Manage language and region](https://msdn.microsoft.com/en-us/windows/uwp/globalizing/manage-language-and-region)
* [Put UI strings into resources](https://msdn.microsoft.com/en-us/windows/uwp/globalizing/put-ui-strings-into-resources)

## Topic-III: Develop/Debug UWP apps(Level 100-300+)

### Part One:Data PlatForm(Level 100-150)

##### 1.[App Settings and data](https://msdn.microsoft.com/en-us/windows/uwp/app-settings/app-settings-and-data)

* [Guidelines for App Settings](https://msdn.microsoft.com/en-us/windows/uwp/app-settings/guidelines-for-app-settings)
* [Store and retrieve app data](https://msdn.microsoft.com/en-us/windows/uwp/app-settings/store-and-retrieve-app-data)

##### 2.[Files, Folders and Library](https://msdn.microsoft.com/en-us/windows/uwp/files/index)

* [Enumerate and query files and folders](https://msdn.microsoft.com/en-us/windows/uwp/files/quickstart-listing-files-and-folders)
* [Create, write, and read a file](https://msdn.microsoft.com/en-us/windows/uwp/files/quickstart-reading-and-writing-files)
* [KnownFolders for Music, Pictures, and Videos libraries](https://msdn.microsoft.com/en-us/windows/uwp/files/quickstart-managing-folders-in-the-music-pictures-and-videos-libraries)
* [FileOpenPicker/FolderPicker](https://msdn.microsoft.com/en-us/windows/uwp/files/quickstart-using-file-and-folder-pickers)
* [FileSavePicker](https://msdn.microsoft.com/en-us/windows/uwp/files/quickstart-save-a-file-with-a-picker)
* [Track recently used files and folders](https://msdn.microsoft.com/en-us/windows/uwp/files/how-to-track-recently-used-files-and-folders)
* [Access SD card](https://msdn.microsoft.com/en-us/windows/uwp/files/access-the-sd-card)
* [OneDrive files](https://msdn.microsoft.com/en-us/windows/uwp/files/quickstart-determining-availability-of-microsoft-onedrive-files?f=255&MSPPError=-2147217396)
* [Enterprise Data protection](https://msdn.microsoft.com/en-us/windows/uwp/files/protect-your-enterprise-data-with-edp)

##### 3.[Data Access](https://msdn.microsoft.com/en-us/windows/uwp/data-access/index)

* [SQLite](https://msdn.microsoft.com/en-us/windows/uwp/data-access/sqlite-databases)
* [Entity Framework with SQLite](https://msdn.microsoft.com/en-us/windows/uwp/data-access/entity-framework-7-with-sqlite-for-csharp-apps)

##### 4.[Data Binding](https://msdn.microsoft.com/en-us/windows/uwp/data-binding/index)

* [Data Binding OverView](https://msdn.microsoft.com/en-us/windows/uwp/data-binding/data-binding-quickstart)
* [Data Binding In depth](https://msdn.microsoft.com/en-us/windows/uwp/data-binding/data-binding-in-depth)
* [Bind hierarchical data and create a master/details view](https://msdn.microsoft.com/en-us/windows/uwp/data-binding/how-to-bind-to-hierarchical-data-and-create-a-master-details-view)
* [MVVM Design Model](http://blog.galasoft.ch/posts/2015/03/using-mvvmlight-with-windows-10-universal-applications/)

### Part Two: App Model(Level 150+)

##### 1.[App lifecycle](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/app-lifecycle)

##### 2.[Launch an app](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/launch-default-app)

* [Handle URl activation](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/handle-uri-activation)
* [Handle File activation](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/handle-file-activation)
* [Lauch an app for results](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/how-to-launch-an-app-for-results)
* [Auto-launching with AutoPlay](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/auto-launching-with-autoplay)

##### 3.[Add splash screen](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/add-a-splash-screen)

* [Create a customized splash screen](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/create-a-customized-splash-screen)

##### 4.[Backgroundtasks](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/support-your-app-with-background-tasks)

* [Guidelines for background tasks](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/guidelines-for-background-tasks?f=255&MSPPError=-2147217396)
* [Create and register a background task](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/create-and-register-a-background-task)
* [Debug a background task](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/debug-a-background-task)
* [Handle a cancelled background task](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/handle-a-cancelled-background-task)

##### 5.[Tiles, toasts, and notifications](https://msdn.microsoft.com/en-us/windows/uwp/controls-and-patterns/tiles-badges-notifications)

* [Tiles](https://msdn.microsoft.com/en-us/windows/uwp/controls-and-patterns/tiles-and-notifications-creating-tiles)
* [Toast notifications](https://msdn.microsoft.com/en-us/windows/uwp/controls-and-patterns/tiles-and-notifications-adaptive-interactive-toasts)
* [Windows Push Notification Services](https://msdn.microsoft.com/en-us/windows/uwp/controls-and-patterns/tiles-and-notifications-windows-push-notification-services--wns--overview)

### Part Three:User Interaction(Level 150+)

##### 1.[Gesture](https://msdn.microsoft.com/en-us/windows/uwp/input-and-devices/input-primer)

* [Touch interactions](https://msdn.microsoft.com/en-us/windows/uwp/input-and-devices/touch-interactions)

##### 2.[Voice Input](https://msdn.microsoft.com/en-us/windows/uwp/input-and-devices/input-primer)

* [Speech interactions](https://msdn.microsoft.com/en-us/windows/uwp/input-and-devices/speech-interactions)
* [Cortana](https://msdn.microsoft.com/en-us/windows/uwp/input-and-devices/cortana-interactions)

##### 3.[Inputs](https://msdn.microsoft.com/en-us/windows/uwp/input-and-devices/index)

* [Pen and stylus](https://msdn.microsoft.com/en-us/windows/uwp/input-and-devices/pen-and-stylus-interactions)
* [Keyboard](https://msdn.microsoft.com/en-us/windows/uwp/input-and-devices/keyboard-interactions)
* [Mouse](https://msdn.microsoft.com/en-us/windows/uwp/input-and-devices/mouse-interactions)
* [Multiple inputs](https://msdn.microsoft.com/en-us/windows/uwp/input-and-devices/multiple-input-design-guidelines)
* [Handle pointer input](https://msdn.microsoft.com/en-us/windows/uwp/input-and-devices/handle-pointer-input)

### Part Four: Contacts and calendar(Level 100-150)

##### 1.[Select contacts](https://msdn.microsoft.com/en-us/windows/uwp/contacts-and-calendar/selecting-contacts)

##### 2.[Send email](https://msdn.microsoft.com/en-us/windows/uwp/contacts-and-calendar/sending-email)

##### 3.[Send an SMS message](https://msdn.microsoft.com/en-us/windows/uwp/contacts-and-calendar/sending-an-sms-message)

##### 4.[Manage appointments](https://msdn.microsoft.com/en-us/windows/uwp/contacts-and-calendar/managing-appointments)

### Part Five: App-to-App Communication(Level 150-200)

##### 1.[Share Data](https://msdn.microsoft.com/en-us/windows/uwp/app-to-app/share-data)

##### 2.[Receive Data](https://msdn.microsoft.com/en-us/windows/uwp/app-to-app/receive-data)

##### 3.[Copy and Paste](https://msdn.microsoft.com/en-us/windows/uwp/app-to-app/copy-and-paste)

##### 4.[Drag and drop](https://msdn.microsoft.com/en-us/windows/uwp/app-to-app/drag-and-drop)

##### 5.[App Services](https://msdn.microsoft.com/en-us/windows/uwp/launch-resume/how-to-create-and-consume-an-app-service?f=255&MSPPError=-2147217396)

### Part Six:Media(Level 150-250)

##### 1.[Audio](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/background-audio)

* [Background Audio](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/background-audio)
* [Audio Graphs](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/audio-graphs)

##### 2.[Imaging](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/imaging)

* [BitmapDecoder](https://msdn.microsoft.com/library/windows/apps/br226176)
* [BitmapEncoder](https://msdn.microsoft.com/library/windows/apps/br226206)

##### 3.Capture photos and video

* [Capture photos and video with CameraCaptureUI](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/capture-photos-and-video-with-cameracaptureui)
* [Capture photos and video with MediaCapture](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/capture-photos-and-video-with-mediacapture)

##### 4.Media Process

* [System Media Transport Controls](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/system-media-transport-controls)
* [Media casting](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/media-casting)
* [Media playback with MediaSource](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/media-playback-with-mediasource)
* [Transcode media files](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/transcode-media-files)
* [Media compositions and editing](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/media-compositions-and-editing)
* [Process media files in the background](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/process-media-files-in-the-background)
* [Custom Video Effects](https://msdn.microsoft.com/en-us/windows/uwp/audio-video-camera/custom-video-effects)

### Part Seven:Network Development(Level 200+)

##### 1.[Network OverView](https://msdn.microsoft.com/en-us/windows/uwp/networking/index)

##### 2.[Sockets](https://msdn.microsoft.com/en-us/windows/uwp/networking/sockets)

##### 3.[HttpClient](https://msdn.microsoft.com/en-us/windows/uwp/networking/httpclient)

##### 4.[Background transfers](https://msdn.microsoft.com/en-us/windows/uwp/networking/background-transfers)

### Part Eight:Threading and async programming(Level 150+)

##### 1.[Asynchronous Programming](https://msdn.microsoft.com/en-us/windows/uwp/threading-async/asynchronous-programming-universal-windows-platform-apps)

##### 2.[Call asynchronous APIs](https://msdn.microsoft.com/en-us/windows/uwp/threading-async/call-asynchronous-apis-in-csharp-or-visual-basic)

##### 3.[Thread Pool](https://msdn.microsoft.com/en-us/windows/uwp/threading-async/best-practices-for-using-the-thread-pool)

### Part Nine:Debugging,testing and performance(Level 150+)

##### 1.[Deploying and debugging Universal Windows Platform (UWP) apps](https://msdn.microsoft.com/en-us/windows/uwp/debug-test-perf/deploying-and-debugging-uwp-apps)

##### 2.[Testing and debugging tools for Process Lifetime Management (PLM)](https://msdn.microsoft.com/en-us/windows/uwp/debug-test-perf/testing-debugging-plm)

##### 3.[Test with the Microsoft Emulator for Windows 10 Mobile](https://msdn.microsoft.com/en-us/windows/uwp/debug-test-perf/test-with-the-emulator)

##### 4.[Test Surface Hub apps using Visual Studio](https://msdn.microsoft.com/en-us/windows/uwp/debug-test-perf/test-surface-hub-apps-using-visual-studio)

##### 5.[Beta testing](https://msdn.microsoft.com/en-us/windows/uwp/debug-test-perf/beta-testing)

##### 6.[Windows Device Portal overview](https://msdn.microsoft.com/en-us/windows/uwp/debug-test-perf/device-portal)

##### 7.[Windows App Certification Kit](https://msdn.microsoft.com/en-us/windows/uwp/debug-test-perf/windows-app-certification-kit)

##### 8.[Performance](https://msdn.microsoft.com/en-us/windows/uwp/debug-test-perf/performance-and-xaml-ui)

### Part Ten:IAP and Packing app(Level 150+)

##### 1. [In-app product purchases](https://msdn.microsoft.com/en-us/windows/uwp/monetize/enable-in-app-product-purchases)

* [Enable consumable in-app product purchases](https://msdn.microsoft.com/en-us/windows/uwp/monetize/enable-consumable-in-app-product-purchases)
* [Manage a large catalog of in-app products](https://msdn.microsoft.com/en-us/windows/uwp/monetize/manage-a-large-catalog-of-in-app-products)
* [Use receipts to verify product purchases](https://msdn.microsoft.com/en-us/windows/uwp/monetize/use-receipts-to-verify-product-purchases)

##### 2. [Exclude or limit features in a trial version](https://msdn.microsoft.com/en-us/windows/uwp/monetize/exclude-or-limit-features-in-a-trial-version-of-your-app)

##### 3. [Packing your app](https://msdn.microsoft.com/en-us/windows/uwp/packaging/index)

* [Packing UWP apps](https://msdn.microsoft.com/en-us/windows/uwp/packaging/packaging-uwp-apps)
* [Install apps with WinAppDeployCmd.exe tool](https://msdn.microsoft.com/en-us/windows/uwp/packaging/install-universal-windows-apps-with-the-winappdeploycmd-tool)
* [App Capability declarations](https://msdn.microsoft.com/en-us/windows/uwp/packaging/app-capability-declarations)

### Part Eleven:Devices and Sensors(Level 250-300+)

##### 1.[Devices and Sensors overview](https://msdn.microsoft.com/en-us/windows/uwp/devices-sensors/index)

##### 2.[Bluetooth](https://msdn.microsoft.com/en-us/windows/uwp/devices-sensors/bluetooth)

##### 3.[Sensors](https://msdn.microsoft.com/en-us/windows/uwp/devices-sensors/sensors)

##### 4.[Printing and scanning](https://msdn.microsoft.com/en-us/windows/uwp/devices-sensors/printing-and-scanning)

##### 5.[3D Printing](https://msdn.microsoft.com/en-us/windows/uwp/devices-sensors/3d-printing)

##### 6.[NFC](https://msdn.microsoft.com/en-us/windows/uwp/devices-sensors/nfc)

### Part Twelve:Games and DirectX(Level 250-300+)

##### 1.[Games and Directx OverView](https://msdn.microsoft.com/en-us/windows/uwp/gaming/index)

##### 2.[Windows 10 game development guide](https://msdn.microsoft.com/en-us/windows/uwp/gaming/e2e)

##### 3.[Game technologies for UWP apps](https://msdn.microsoft.com/en-us/windows/uwp/gaming/game-development-platform-guide)

##### 4.[The app object and DirectX](https://msdn.microsoft.com/en-us/windows/uwp/gaming/about-the-metro-style-user-interface-and-directx)

##### 5.[Basic 3D graphics for DirectX games](https://msdn.microsoft.com/en-us/windows/uwp/gaming/an-introduction-to-3d-graphics-with-directx)

##### 6.[Create UWP game with DirectX](https://msdn.microsoft.com/en-us/windows/uwp/gaming/tutorial--create-your-first-metro-style-directx-game)

## Note:For the Part Eleven and Part Twelves, you can choose to focus it later.

## Topic-IV: Publish UWP apps(Level 100-200)

##### 1.[Using the Windows Dev Center dashboard](https://msdn.microsoft.com/en-us/windows/uwp/publish/using-the-windows-dev-center-dashboard)

##### 2.[Create your app by reserving a name](https://msdn.microsoft.com/en-us/windows/uwp/publish/create-your-app-by-reserving-a-name)

##### 3.[App submissions](https://msdn.microsoft.com/en-us/windows/uwp/publish/app-submissions)

* [Set app pricing and availability](https://msdn.microsoft.com/en-us/windows/uwp/publish/set-app-pricing-and-availability)
* [Enter app properties](https://msdn.microsoft.com/en-us/windows/uwp/publish/enter-app-properties)
* [Upload app packages](https://msdn.microsoft.com/en-us/windows/uwp/publish/upload-app-packages)
* [Create app descriptions](https://msdn.microsoft.com/en-us/windows/uwp/publish/create-app-descriptions)
* [The app certification process](https://msdn.microsoft.com/en-us/windows/uwp/publish/the-app-certification-process)

##### 4.[IAP submissions](https://msdn.microsoft.com/en-us/windows/uwp/publish/iap-submissions)

* [Set your IAP product type and product ID](https://msdn.microsoft.com/en-us/windows/uwp/publish/set-your-iap-product-id)
* [Enter IAP properties](https://msdn.microsoft.com/en-us/windows/uwp/publish/enter-iap-properties)
* [Set IAP pricing and availability](https://msdn.microsoft.com/en-us/windows/uwp/publish/set-iap-pricing-and-availability)
* [Create IAP descriptions](https://msdn.microsoft.com/en-us/windows/uwp/publish/create-iap-descriptions)
* [Manage IAPs in bulk](https://msdn.microsoft.com/en-us/windows/uwp/publish/manage-iaps-in-bulk)

## Related Resources

#### UWP Forum:

https://social.msdn.microsoft.com/Forums/windowsapps/en-US/home?forum=wpdevelop

#### Porting app to UWP:

https://msdn.microsoft.com/en-us/windows/uwp/porting/index

#### Desktop App Converter Preview (Project Centennial):

<https://msdn.microsoft.com/en-us/windows/uwp/porting/desktop-to-uwp-run-desktop-app-converter>

#### Windows Phone Emulator Troubleshooting:

<https://msdn.microsoft.com/en-us/library/windows/apps/jj681694(v=vs.105).aspx>

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#### Debug Tools:

* [Process Explorer](https://technet.microsoft.com/en-us/sysinternals/processexplorer.aspx)
* [Process Monitor](https://technet.microsoft.com/en-us/sysinternals/processmonitor.aspx)
* [Visual Live Tree(XAML)](https://blogs.msdn.microsoft.com/cdndevs/2015/08/07/live-visual-tree-in-visual-studio-3/)
* [Visual Studio Diagnostic Tools](https://blogs.msdn.microsoft.com/visualstudioalm/2015/01/16/diagnostic-tools-debugger-window-in-visual-studio-2015/)

#### Code Sample:

https://github.com/Microsoft/Windows-universal-samples

#### UWP Video:

https://channel9.msdn.com/Series/Windows-10-development-for-absolute-beginners