# Lesson 1 – Introduction to Win 8 and VS 2012

## Sub Lesson 1 – Lap around Windows 8

Windows 8 is a new beast, it looks different, it feels different, and it is different. Before we start looking at how to build C#/XAML applications for Windows 8 we are going to take a quick lap around the operating system and take a look at many of the changes. Along the way I will point out many of the features which we will cover in our lessons.

## Sub Lesson 2 – Lap around Visual Studio 2012

With the release of Windows 8 there was a new release of Visual Studio which added the support needed to build Windows 8 applications. Before we start learning how to build Windows 8 applications we need to take a quick lap around the changes in Visual Studio to familiarize ourselves w/ the various changes.

# Lesson 2 – Using MVVM

## Sub Lesson 1 – Introduction to Mvvm

When building XAML based applications the MVVM (Model, View, View-Model) design pattern is the defacto way for building applications. In this lesson we are going to take a look at how to use the MVVM concepts and principals when building a XAML application.

## Sub Lesson 2 – Data Binding

When using the MVVM pattern in XAML one of the key tenets is to not use the code behind if at all possible. In this lesson we are going to take look at how the binding engine and MVVM go hand in hand. We are going to take a look at multiple ways to bind our UI elements to our View Model in order to display and interact with data.

## Sub Lesson 3 – Commanding

When using the MVVM pattern in XAML one of the key tenets is to not use the code behind if at all possible. In this lesson we are going to take look at how the binding engine and MVVM go hand in hand. We are going to take a look at multiple ways to bind our UI elements to our View Model in order to display and interact with data.

# Lesson 3 – General Application Features

## Sub Lesson 1 – Navigation

This lesson is going to focus on how to handle page navigation within your Windows 8 application. We will take a look at how to use and manipulate the Navigation stack for moving forwards and backwards between pages. We will also take a look how we can pass values between pages during navigation as well as how to listen to the various events available to you for page navigation.

## Sub Lesson 2 – Application Bar

This lesson is we are going to take a look at how to use the Application Bar within your Windows 8 application. We will focus on how to setup both Top and Bottom application bars. We will also take a look how different usage patterns for the Application Bar in your application.

## Sub Lesson 3 – Application Life Cycle

This lesson is we take a look at how to handle the 3 application Life Cycle events, which are Launching, Suspending and Resuming. We will learn the tricks to being able to debug these events in your application as well as how to handle or react to each of the events.

## Sub Lesson 4 – Application View States

This lesson is we are going to learn about the 3 different application view states of a Windows 8 application. These states are Full screen, which is when the application occupies 100% of the screen. Snapped state, which is when the application is snapped to either the left or right side of the screen and occupies 320 pixels. Finally we will look at Fill state, which is when the application occupies all but 320 pixels of the screen. We will look at each of these states and understand how react to them as well as learn how to reformat your UI elements accordingly.

# Lesson 4 – User Controls

## Sub Lesson 1 – Grid View

This lesson is we are going to learn how to use the Grid View control to build amazing collection based views. We will start off by learning how to use the basics of the Grid View in order to simply bind our collection to the control to display its data. We will then learn how to use the Grid Views grouping abilities to display our collection of data based on groups. Finally we will learn how we can manipulate the look and feel of our grid view at design time which will make styling our grid much simpler and easier.

## Sub Lesson 2 – List View

This lesson is we are going to learn how to use the List View control to build amazing List based views. We will start off learning the basics of the List view control. We will then learn how to change and manipulate the styles of our list view in order to meet our design needs. Finally we will learn how to handle the selection of a given item in our list view by our users.

## Sub Lesson 3 – Flip View

This lesson is we are going to learn how to use the Flip View control to build unique and amazing views which allow your users to flip or swipe through their data. We will start off leaning the basics of the Flip View, we will then take a look at how we can change the look and feel of the control to meet our needs. Finally we will end by learning how to handle the selection of a flip view item by our user.

## Sub Lesson 4 – Styles & Resources

In this lesson we will take a look at how to use styles and resources to customize the appearance of your application. We will learn how to styles which are reusable across many controls and views, we will also learn how we can have styles inherit off of each other which will allow you to reuse components of a style as you extend your application. We will then learn how we can override our shared styles by using line content to handle simple one off style changes.

# Lesson 5 – Contracts

## Sub Lesson 1 – Search Contracts

In this lesson we will take a look at how to use the Search Contract. The search contract will allow your application to be searchable via the Search charm. We will look at how to enable searching from both inside your application as well as from outside. We will also look at how we provide users suggestions while they are typing their search term in order to guide them towards the right data.

## Sub Lesson 2 – Share Source Contract

In this lesson we will take a look at how to use the Share Source Contract. The share source contract will enable your application to share its data with other applications. We will take a look at how we can share simple data such as text or urls as well as how to share complex data such as images or files.

## Sub Lesson 3 – Share Target Contract

In this lesson we will take a look at how to use the Share Target Contract. The share target contract will enable your application to receive data from a Share Source. We will learn how we can enable this contact inside your application. We will also take a look at how to receive and process the data being given to us. Finally we will learn how to acknowledge the fact that we have received data so the sharing application can close the share loop.

## Sub Lesson 4 – Settings Contract

In this lesson we will take a look at how to use the Settings Contract. The settings contract will allow you to hook you application settings into the Settings Charm. We will learn how to not only hook into the Settings charm but we will also learn how to build our UI need so users can manipulate our settings.

# Lesson 6 – Live Tiles

## Sub Lesson 1 – Basic Tiles

In this lesson we will learn the basics about application tiles. We will about each of the different tile sizes and why they are important. We will also learn how to change the background colors and display text on our tiles.

## Sub Lesson 2 – Secondary Tiles

In this lesson we will learn how to create secondary tiles which can deep link into your application. Secondary tiles will allow you to create new tiles on the start screen in order to allow users to quickly jump to important pages in your application. We will also review how you pin/unpin these tiles via application code.

## Sub Lesson 3 – Live Tiles

In this lesson we will learn how to light up the start screen by creating live tiles. Live tiles are tiles which have the ability to change their appearance or data based on application state. We will learn how to create our first live tile as well as take a look at the many different UI permutations which live tiles provide. We will finally take a look at how we can push content update to our tiles via application code.

## Sub Lesson 4 – Advanced Tiles

In this lesson we will dive deeper into live tiles and learn about some of their advanced features. We will learn how to setup your tiles to update at some point in the future. We will learn how to query the update queue for each tile to determine if it has a scheduled update. Finally we will learn how to create tiles whose data can expire at some point in time.

## Sub Lesson 5 – Toast Notifications

In this lesson we will explore how to send in application toast notifications. We will learn how to determine if notifications have been enabled by your users. We will also learn how to send plain toasts along with toasts which have images associated. Finally we will learn how to schedule a toast so it can be sent at some point in the future.

# Lesson 7 – Transitions and Animations

## Sub Lesson 1 – Visual State Manager

In this lesson we will learn how to use the Visual State Manager in our Modern UI application. We will learn how to take a 3rd party UI control and extend it via the Visual State Manager. We will also learn how to use the Visual State Manager to create transitions in our own custom controls.

## Sub Lesson 2 – Animations

In this lesson we will learn how to create and use animations. We will take a look at how to create a simple animation by using Blend, we will then learn how to trigger our animations by utilizing Story Boards. Finally we will learn how to apply easing functions and easing modes to our animations to give them smooth and fluid movement.

# Lesson 8 – Device Sensors

## Sub Lesson 1 – Camera

In this lesson we will learn how to use the camera which will be on most Windows 8 devices. We will first learn how to enable access to the camera. We will then learn how to use the camera to take both pictures and videos.

## Sub Lesson 2 – Inclinometer

In this lesson we will learn how to use the inclinometer which is a sensor which can be used to measure the rotational movement of your device on the X, Y and Z axis. We will start off by learning how to get access to the sensor. We will then learn how acquire and react the sensor readings via the eventing and polling models.

## Sub Lesson 3 – Light Sensor

In this lesson we will learn how to use the light sensor to measure the ambient light around your device. We will start off by learning how to get access to the sensor. We will first learn how to determine if the user’s device has a light sensor, we will then learn how to attach to the sensor in order to get readings. Finally we will learn how to acquire the sensor readings via the eventing and polling models.

## Sub Lesson 4 – Gyronmeter

In this lesson we will learn how to use the gyrometer, which is a sensor to measure the angular movement velocity of your user’s device. We will start off by learning how to get access to the sensor. We will first learn how to determine if the user’s device even has a gyrometer, we will then learn how to attach to the sensor in order to get readings. Finally we will learn how to acquire the sensor readings via the eventing and polling models.

## Sub Lesson 5 – Accelerometer

In this lesson we will learn how to use the Accelerometer, which is a sensor to measure the angular acceleration force of your user’s device. We will start off by learning how to get access to the sensor. We will first learn how to determine if the user’s device even has a Accelerometer, we will then learn how to attach to the sensor in order to get readings. Finally we will learn how to acquire the sensor readings via the eventing and polling models.