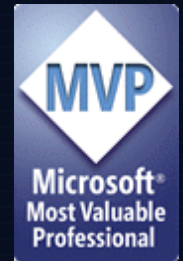


Windows Phone 8 Workshop

Beginner's Guide

Ariel Ben Horesh
Founder, Director of Apps
CodeValue
arielbh@codevalue.net

Pavel Yosifovich
CTO
CodeValue
pavely@codevalue.net



Teal

Lime

Pink

Orange

Blue

Red

Green

Brown

Purple

Agenda

Part 1: Fundamentals

- Tools and Installation

- XAML and Code

- Elements and Controls

- Resources

- Layout and Panels

- Data Binding

- Navigation

Part 2: Coding!

Getting the Tools

Go to <http://dev.windowsphone.com>

Download the Windows Phone 8 SDK

Install on Windows 8 64 bit with Hyper-V support

Required for emulator

Installs the Express edition of Visual Studio if VS is not present

Otherwise, integrates with existing Visual Studio installation

Start developing!



Creating a new Project

Demo

XAML

eXtensible Application Markup Language

Declarative way of creating objects and setting properties

Used mostly for UI and related objects

Visual Studio provides a designer that generates XAML

Can also use Expression Blend

Special XAML features

- Type converters

- Markup extensions

XAML vs. Code

Demo

XAML Rules

XML Element – create a new instance

XML attribute – set a property

Type converter may execute

Can use markup extensions

Type.Property – set a “complex” property value

ContentProperty attribute – no need to specify Type.Property

Property of type **IList** or **IDictionary**

Add child elements (XAML calls appropriate Add method)

Need **x:Key** in case of a dictionary

Elements and Controls

The WP8 UI class hierarchy is quite complex

Everything is based on the **FrameworkElement** class which contains the fundamental properties of all elements

Many built in elements and controls

- Can create custom elements

Elements vs. Controls

- The **Control** class has a **Template** property which elements lack

Elements and Controls

Demo

Layout and Panels

WP8 provides layout containers (panels) that arrange elements in certain ways

Grid, Canvas, StackPanel

Combining panels can create complex and flexible user interface

More panels exist in the Windows Phone 8 Toolkit



Layout Panels

Demo

Resources

Arbitrary named .NET objects, stored in the Resources collection property of an element

Typically used for sharing the resource among child objects

Application wide resources stored in App.Xaml

Resources accessed in XAML with **{StaticResource}**

Resource keys are lookup up the visual tree



Resources

Demo

Control Families

Content controls

- Derive from **ContentControl**

- Have a Content property, which can be anything

- Customizable via a **DataTemplate** (discussed later)

Items controls

- Derive from **ItemsControl**

- Properties

 - ItemTemplate** – template for individual items

 - ItemsPanel** – modify the hosting panel for items

Data Binding

Data binding means tying two arbitrary objects

Typical scenario is a non-visual object (or collection) to a visual element

Any changes to the non-visual object are reflected in the visual element (and optionally vice versa)

Applied mostly declaratively in XAML

Data Templates

The default data binding rendering is usually not enough

Different types (e.g. images), formatting, colors

Rendering can be modified via

Data templates

Value converters

Technically, unrelated to data binding



Data Binding & Data Templates

Demo

Navigation

A typical app is made up of more than one page

Navigation to a different page can be done with the **NavigationService.Navigate** method

- Available in any **Page's NavigationService** property

- Uses a URI for a XAML page

- Can add named parameters as query string

 - Available with the **NavigationContext.QueryString** property

Pages can override **OnNavigatedTo**, **OnNavigatedFrom** and **OnNavigatingFrom**

Data Binding & Data Templates

Demo

Sample Project

Do one of the following

- Build a simple app based on your ideas

- Start converting an existing iOS/Android app to WP8

- Build the following suggested project

Coding!