

# Announcing Universal Apps



A dark gray trapezoidal shape, wider on the left and tapering towards the right, serving as a background for the 'Agenda' text.

# Agenda

Overview of universal apps

Visual Studio Support

Concepts

Code Reuse

Store Support

Q&A

# Prerequisites

- Visual Studio 2013
- Visual Studio 2013 Update 2

Get the express edition of VS 2013 w/Update 2 @  
<http://go.microsoft.com/fwlink/p/?LinkId=389848>

# Universal apps

- Universal apps enable building applications on the converged Windows 8.1 and Windows Phone 8.1 platforms
- Supported for C#, C++ and JavaScript
- Create universal apps using project templates, migrating Windows 8.1 / Windows Phone 8.1 apps

# Windows/Windows Phone apps

XAML

HTML / CSS

C  
C++

C#  
VB

JavaScript  
(Chakra)

## WinRT APIs

Communication  
& Data

Graphics &  
Media

Devices &  
Printing

Application Model

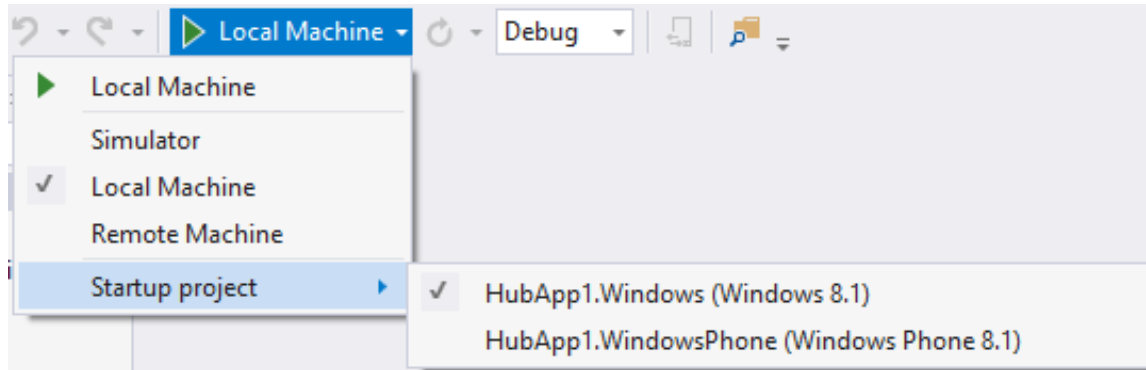
Windows Core OS Services

# Shared projects

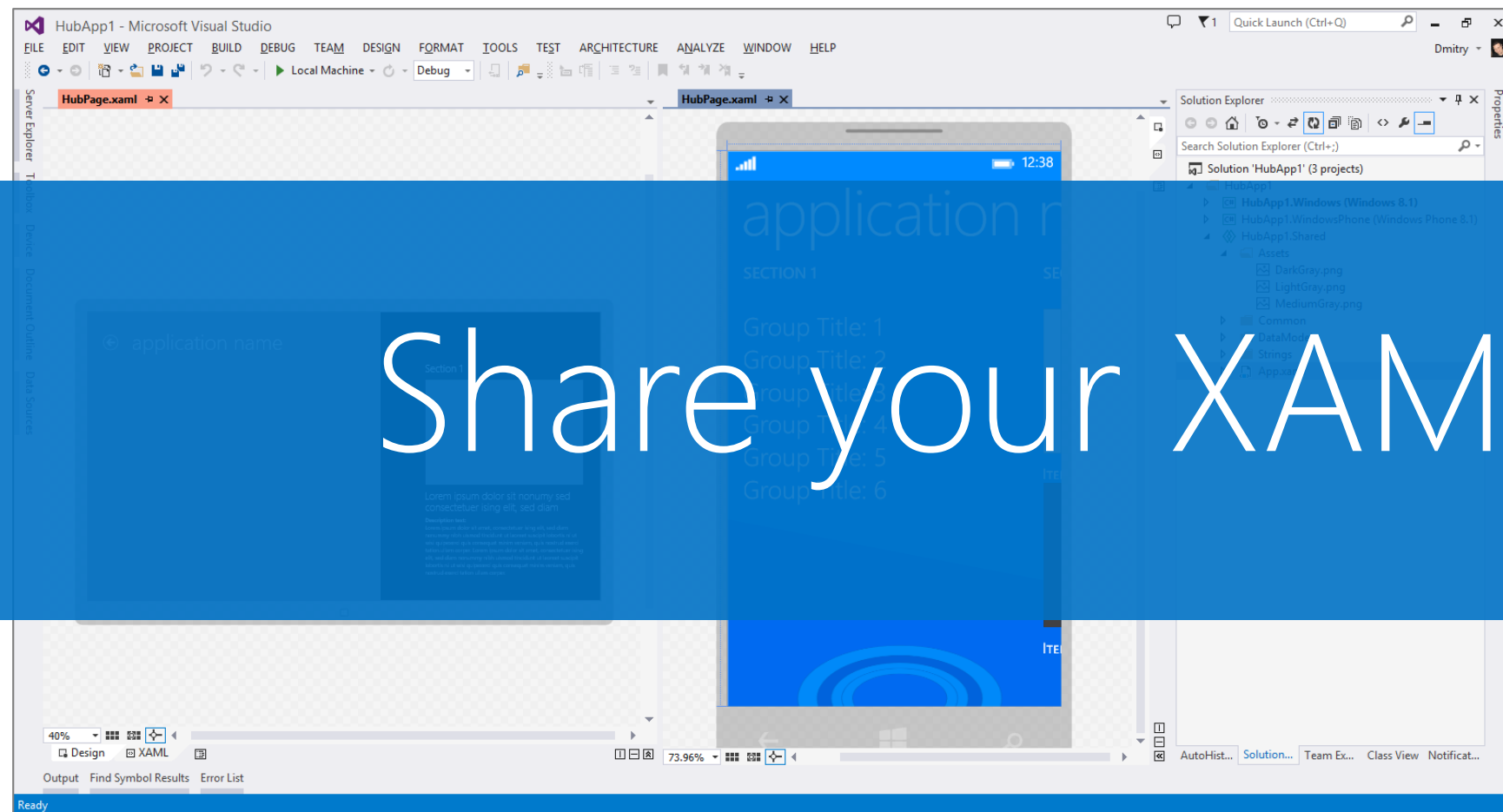
- Allow sharing source between converged apps
- Don't have any binary output
- Supports all item types
  - Code files .cs, .js, .cpp, .h
  - XAML
  - Images .png, .jpg...
  - RESW
  - XML etc...

# Switching startup projects

- Quick and easy way to change startup projects using debug target dropdown



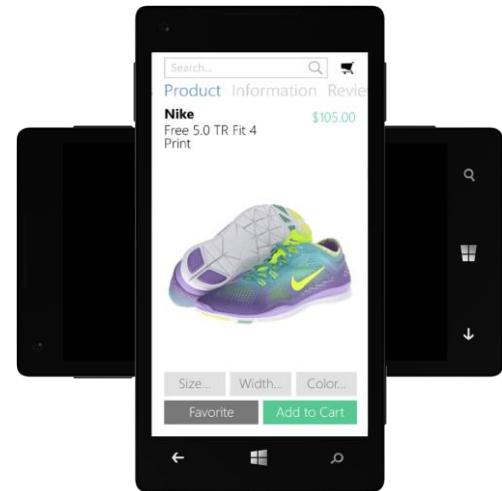
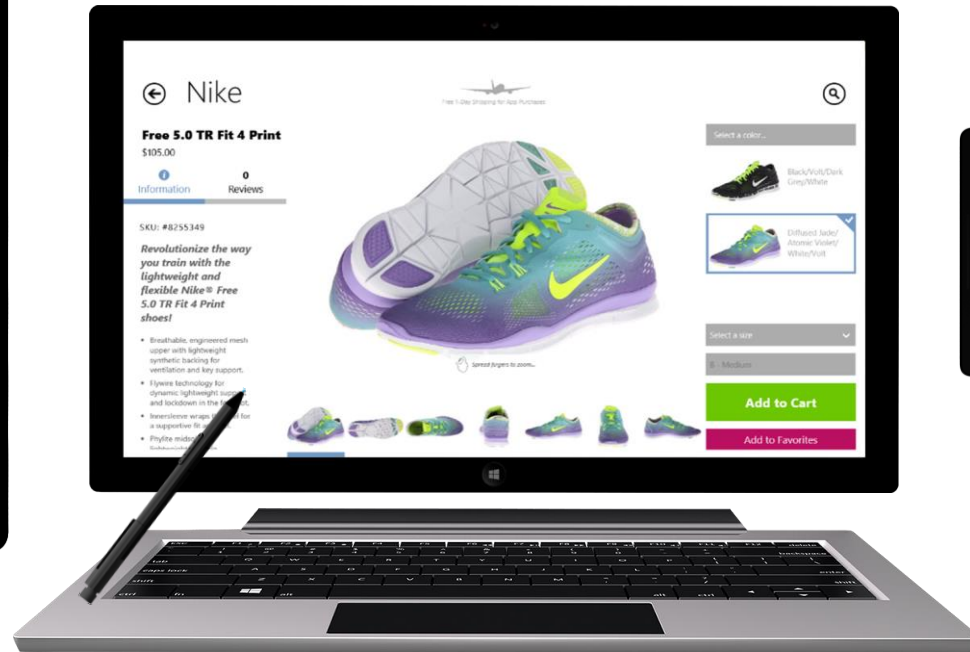
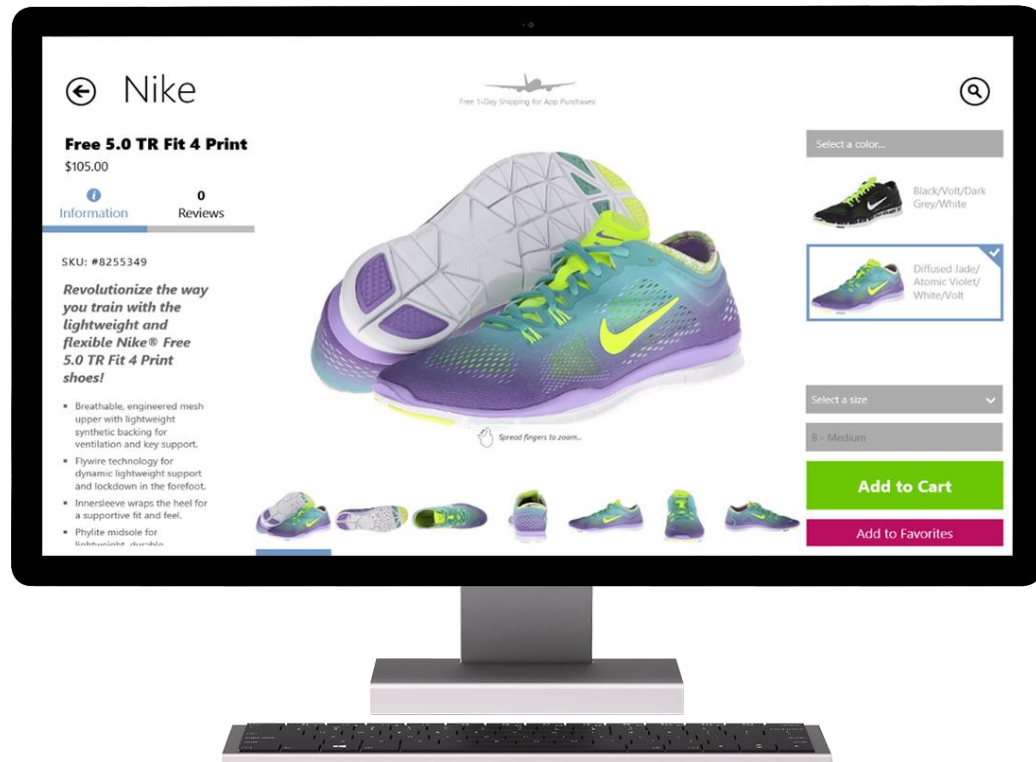
- Supported for all Store platforms
- Enabled if you have more than one application project in the solution



Share your XAML UI!



# You can *tailor* the design to each device





What is  
Common?

API Same

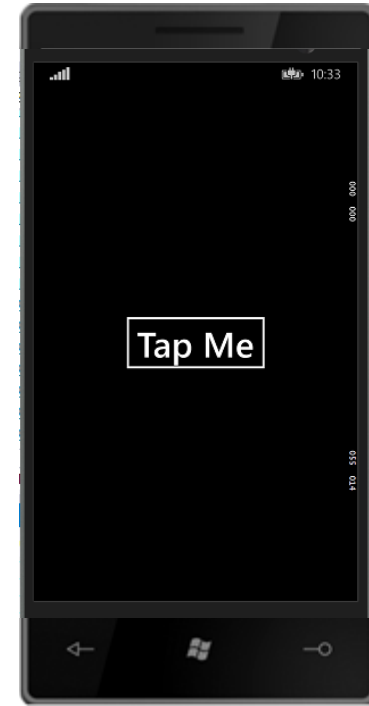
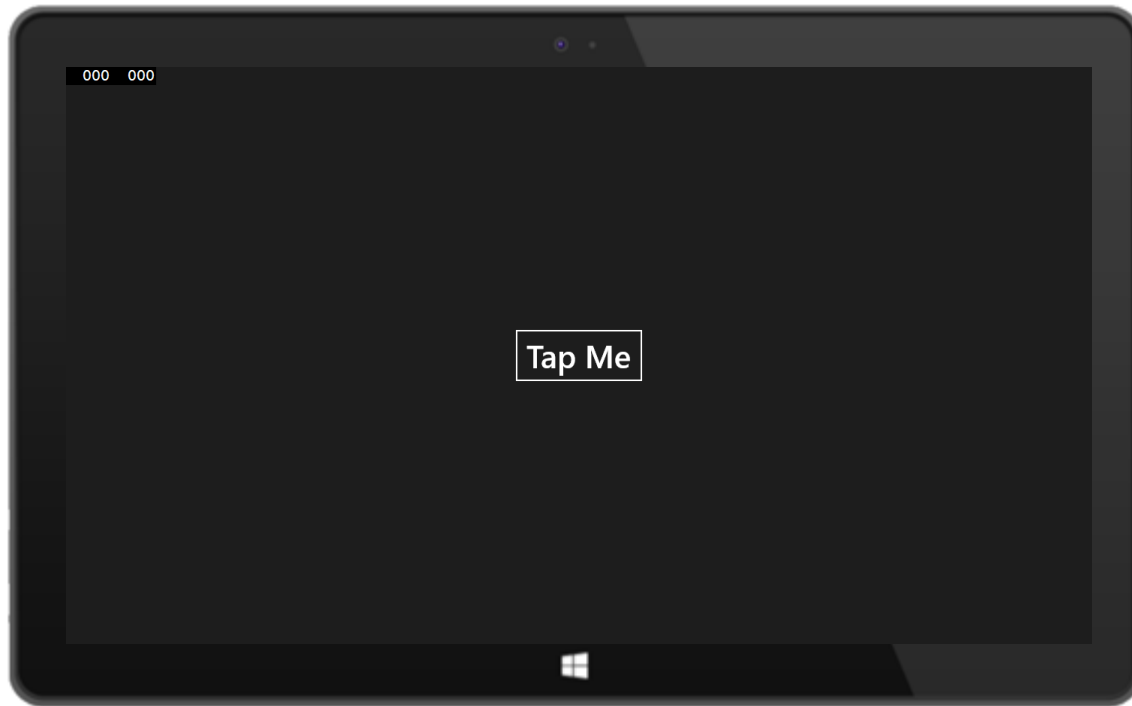
API Same, tailored behavior

Device-specific APIs



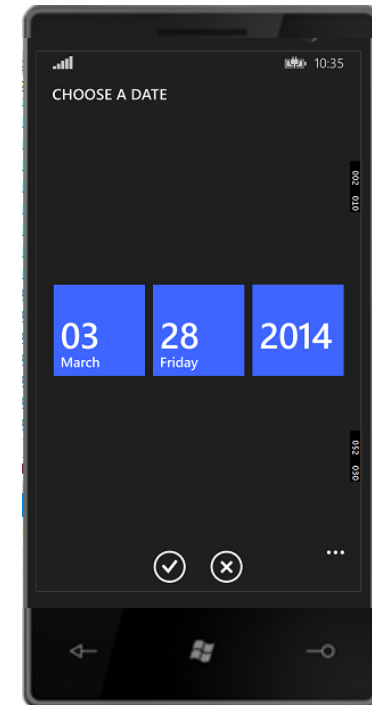
# 'Primitives' - same

- Layout: Panel, StackPanel, Grid, Border
- Buttons, Slider, ToggleSwitch, CheckBox, RadioButton, ProgressBar
- TextBox/TextBlock
- Shapes/Path



# 'Primitives' – same API, tailored behavior

- Hub
- AppBar/CommandBar
- Date/Time Pickers and List Pickers
- ListView
  - Multi-select; containers, swipe selection
- Flyouts
- Media
- Ads SDK\*



# Device-specific APIs



- Windows

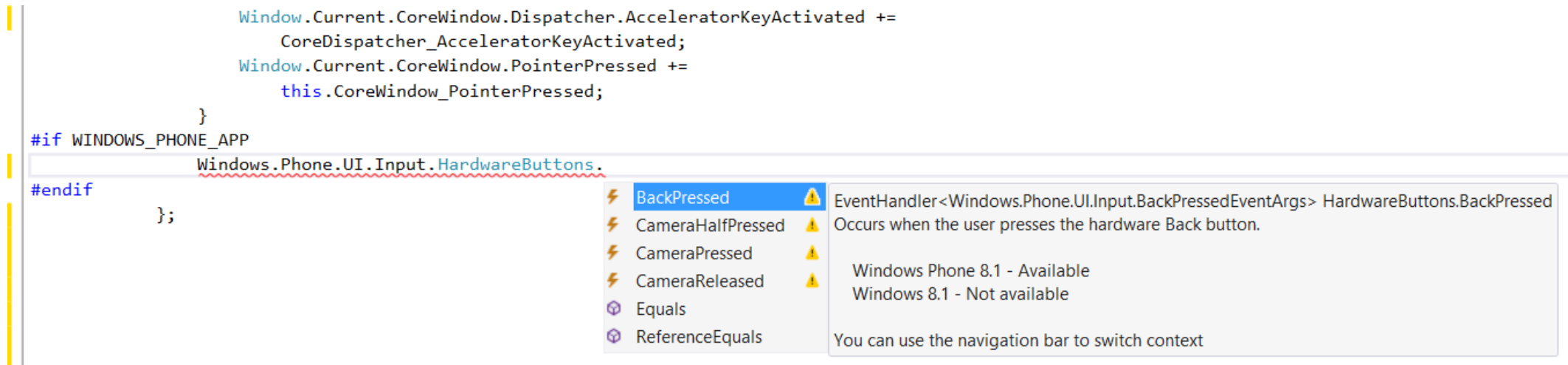
- SearchBox
- SettingsFlyout

- Windows Phone

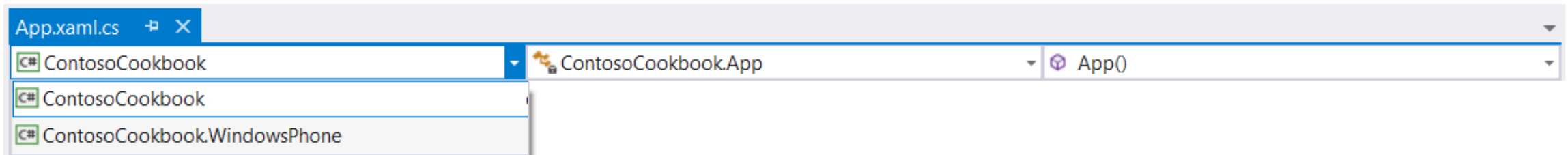
- Pivot
- AutoSuggestBox
- ContentDialog
- Maps
- System Chrome
  - Progress area, in-call UI

# Code editing experience

- Intellisense warnings for platform specific APIs



- Switch project context using navbar





# Use conditional constants

**C#**: WINDOWS\_APP and WINDOWS\_PHONE\_APP

```
#if WINDOWS_PHONE_APP
    Windows.Phone.UI.Input.HardwareButtons.BackPressed +=
        this.HardwareButtons_BackPressed;
#endif
```

**C++**: WINAPI\_FAMILY\_PC\_APP and WINAPI\_FAMILY\_PHONE\_APP

```
#if WINAPI_FAMILY==WINAPI_FAMILY_PHONE_APP
    _backPressedEventToken = HardwareButtons::BackPressed +=
        ref new EventHandler<BackPressedEventArgs^>(this,
            &NavigationHelper::HardwareButton_BackPressed);
#endif
```

# Code reuse options for universal apps

call WinRT APIs  
include code and .xaml files



## Shared Projects

**New!**

Sharing **source code** between projects

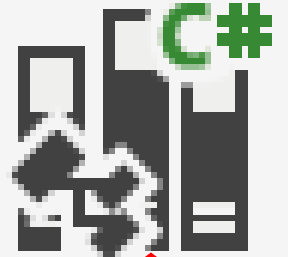


I can easily include platform-specific code under #if or partial classes

## Portable Class Libraries

Sharing one **binary** between projects

I compile just once and know it works on all platforms



**Improved!**



New shared  
features across  
Windows Phone  
and Windows  
Dev Center

App Linking  
App Name Reservation  
Unified Registration  
Consolidated Pricing

# Linking Windows Store and Windows Phone apps to create a universal Windows app

## Windows Store



### Halo: Spartan Assault

Halo: Spartan Assault brings the excitement of Halo combat to touch-based devices for the

\$4.99  ★★★★★ 2,551 Games

## Windows Phone Store



### Halo: Spartan Asslt.

Microsoft Studios

\$4.99 



1330 ratings

# App name reservation for Windows Phone

## App name

Your app can share the same identity across the Windows Phone Store and the Windows Store. This means that a customer who has purchased the app in either Store will be able to download the app from the other Store without paying for it again, and your app can roam data between Windows and Windows Phone. [Learn more.](#)

Your app's identity is assigned when you reserve a name for this app on either the Windows Phone Dashboard, the Windows Store Dashboard, or Visual Studio. If you've already reserved a name for this app and want to share the same identity across both Windows Phone and Windows, choose that name below. If you haven't reserved a name for this app yet or don't want your app to share the same identity across both Stores, reserve a new name for it below. Once you publish this submission, this app will permanently use this identity, and the identity can't be changed. Any name you reserve here will also be reserved for you in the Windows Store.

After you reserve a name, you must submit the app to the Windows Store and/or the Windows Phone Store within one year, or you will lose your name reservation. [Learn more.](#)

Name\*



Reserve app name

# App name reservation for Windows 8.X

## App name

Select from one of the following two options:

- Choose one of your existing app names. The same name will be used in the Windows Store and the Windows Phone Store. This means that a customer who has purchased the app in either Store will be able to download the app from the other Store without paying for it again, and your app can roam data between Windows and Windows Phone. [Learn more](#)
- Reserve a new name for your Windows Store app. You'll be able to publish the same app to the Windows Phone Store later. [Learn more](#)

☒ **Use an existing app name**

MY SUPER AWESOME APP ▼

☐ **Create a new app by reserving a unique name**

# Publish for both with one registration

The Windows Phone Dev Center has everything you need to create great apps and publish them in the Windows Phone Store for the world to see, try, and buy. You can [download the development tools](#) for free and start creating your app right away!

When you're ready, you'll need a developer account to publish your apps in the Store. When you register with Windows Phone Dev Center, you'll also be registered with the Windows Dev Center.

Here's what you can already do for free:

- Build Windows Phone apps and Windows Store apps
- Get free development tools, including a Windows Phone emulator to test your app on
- Sideload your apps so you can test them on your own Windows Phone
- Find resources from Microsoft and the developer community that can help you succeed

# Consolidated Pricing

Price tier \* ?

Pick a price tier

Pick a price tier

Free

0.99 USD

1.29 USD

1.49 USD

1.99 USD

2.49 USD

2.99 USD

3.49 USD

3.99 USD

4.49 USD

4.99 USD

Pricing

Base price\*

Free or paid? If paid, how much? [Learn more](#) about how this affects pricing in different countries/regions and how the Commerce Expansion Adjustment may affect your proceeds in certain countries/regions.

0.00

0.00

0.99

1.29

1.49

1.99

2.49

2.99

3.49

3.99

4.49

4.99

USD



# Resources

Universal Windows app samples:

<http://code.msdn.microsoft.com/windowsapps/Universal-Windows-app-cb3248c3>

Build apps that target Windows and Windows Phone 8.1 by using Visual Studio (Windows Runtime apps using C#/VB/C++ and XAML):

<http://msdn.microsoft.com/en-us/library/windows/apps/dn609832.aspx#addsupport>

Dev Center now open for Windows Phone 8.1 and universal Windows app submissions:

<http://blogs.windows.com/windows/b/buildingapps/archive/2014/04/14/dev-center-now-open-for-windows-phone-8-1-and-universal-windows-app-submissions.aspx>