



# TECH DAYS 2015

BREAKING NEW GROUND

# Building your first Android app using Xamarin

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# Hi, I'm Gill!



**Gill Cleeren**

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Trainer & speaker

The Twitter logo, consisting of the word "Twitter" in white sans-serif font on a blue square background.

Twitter

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# I'm a Pluralsight author!

- Courses on Windows 8, social and HTML5
- <http://gicl.me/mypscourses>



# Agenda

- Overview of Xamarin and Xamarin.Android
- Xamarin.Android fundamentals
  - Creating a detail screen
- Lists and navigation
  - Navigating from master to detail
- (Optional) Intro to using Fragments
- Optimizing the application
- Preparing for store deployment

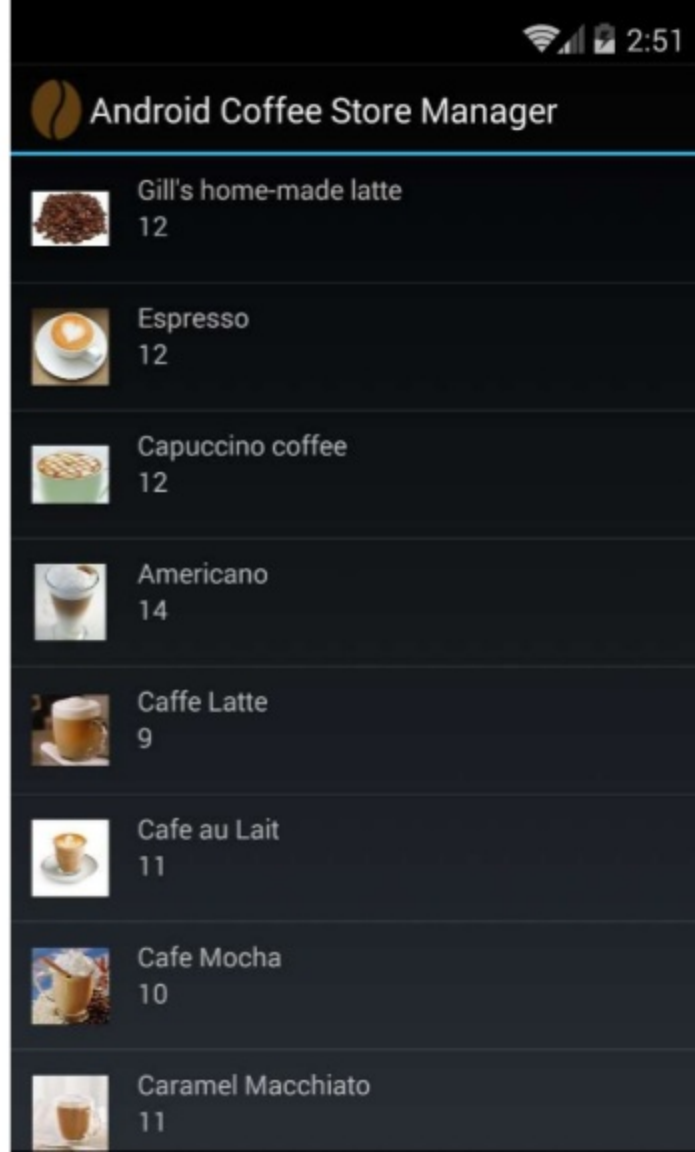
# Targets of this talk

- Understanding the fundamentals of Android app development with Xamarin
- See how a fully working app can be built



# The demo scenario

- Android Coffee Store Manager
  - List of coffee
  - Navigation to details page





## Android Coffee Store Manager



Gill's home-made latte

12



Espresso

12



Capuccino coffee

12



Americano

14



Caffe Latte

9



Cafe au Lait

11



Cafe Mocha

10



Caramel Macchiato

11

# DEMO

Looking at the finished application

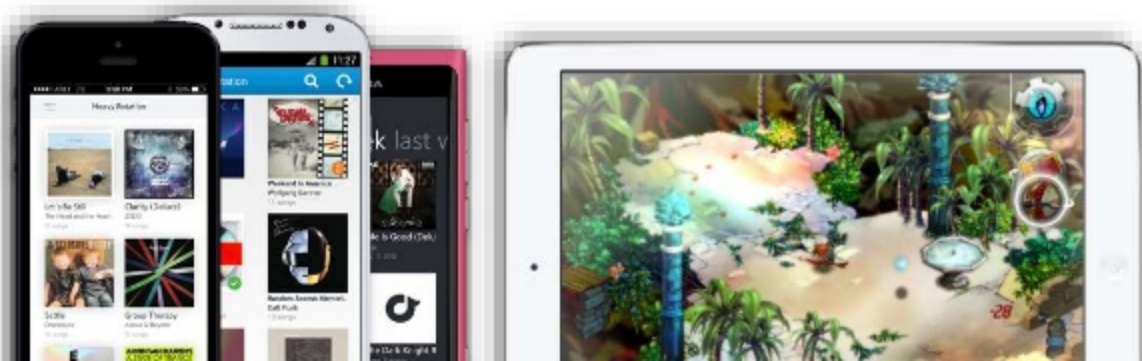


# Overview of Xamarin and Xamarin.Android



# Hello Xamarin

- Xamarin enables developers to reach all major mobile platforms!
  - Native User Interface
  - Native Performance
  - Shared Code Across Platforms
  - C# & .NET Framework
- Toolset on top of Visual Studio
  - Enables VS to create native iOS and Android apps
- Commercial product



# Write Everything in C#

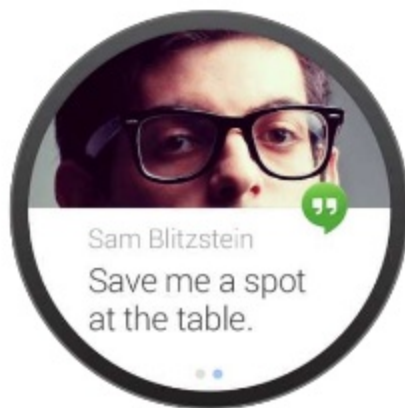
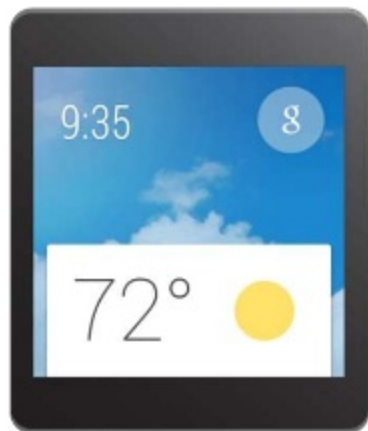


iOS, Android, Windows, Windows Phone, Mac  
Billions of Devices covered!

# The Xamarin platform



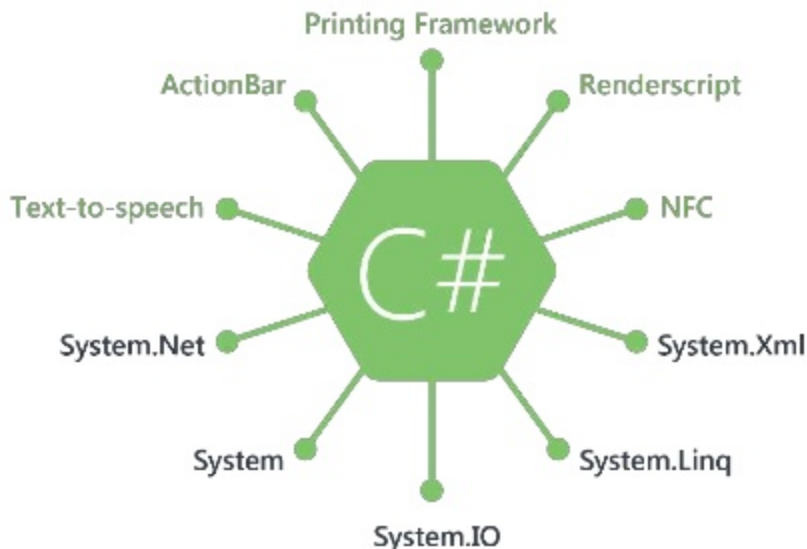
# Xamarin.Android exposes many extra device types





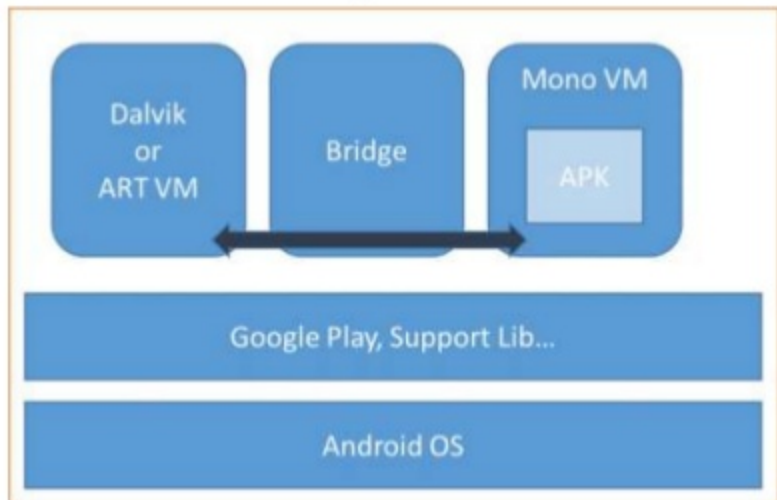
# Xamarin.Android

Anything you can do in Java/Android can be done in C# and Visual Studio (or Xamarin Studio) with Xamarin!



# How Xamarin works on Android

- Mono VM + Java VM execute side-by-side (supports both Dalvik and ART)
- Mono VM JITs IL into native code and executes most of your code
- Can utilize native libraries directly as well as .NET BCL

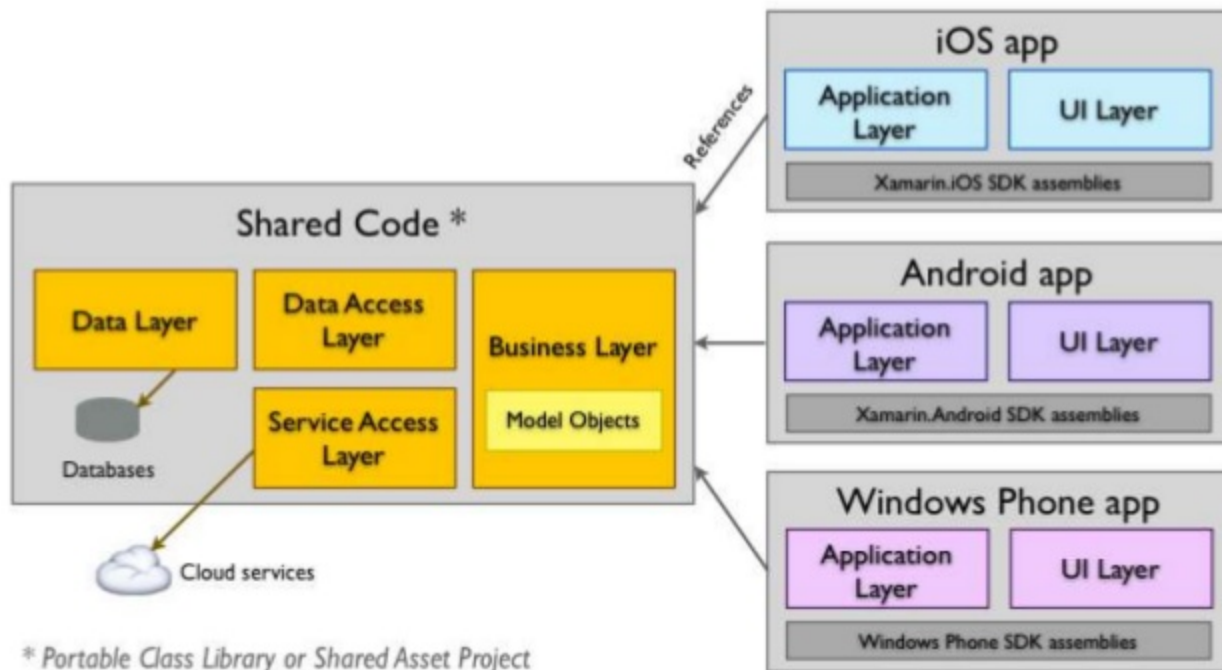


# A word on code-sharing

- Xamarin brings development time through the use of code-sharing
- Possible (currently!) using
  - Shared projects:
    - allows organizing the shared code
    - #if directives for platform specific code
  - PCL
    - “include” the platforms we want to support
    - Abstract to interfaces where platforms have specific implementations



# Target architecture for a Xamarin app





Preparing for  
Android development

# What you need for Xamarin.Android development

- Xamarin license (Xamarin.Android)
- PC or Mac
- Visual Studio or Xamarin Studio
- Android SDK and Emulators (installed via Xamarin setup)
- Emulator
- Device (not *really* required but...)

# Installing Xamarin.Android

