Microsoft Azure - Starter Kits for Partners

Hands on Lab

Basic ToDo Sample App with Xamarin and Azure

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# Introduction

* 1. This document aims to provide information on developing apps with Xamarin. By choosing Xamarin and keeping a few things in mind when you design and develop your mobile applications, you can realize tremendous code sharing across mobile platforms, reduce your time to market, leverage existing talent, meet customer demand for mobile access, and reduce cross-platform complexity.

1. A key component of building cross-platform applications is being able to **share code across various platform-specific projects**. However, this is complicated by the fact that different platforms often use a different sub-set of the .NET Base Class Library (BCL), and therefore are built to a different .NET Core Library Profile. This means that each platform can only use class libraries that are targeted to the same profile, so they would appear to require separate class library projects for each platform.
2. There are two major approaches to code sharing that address this problem: **Shared Asset Projects** and **Portable Class Library (PCL) projects**. Below are examples of these approaches. Click this [link](https://developer.xamarin.com/guides/cross-platform/application_fundamentals/building_cross_platform_applications/sharing_code_options/) for additional information on these sharing code options.

# ToDo (Forms)

Xamarin.Forms is a cross-platform UI toolkit that allows developers to efficiently create native user interface layouts that can be shared across iOS, Android, Windows Phone, Windows Store, and Universal Windows Platform apps.

**Todo (Forms w/ SQLite) sample app**

*To download the sample app:*

1. Navigate to <https://developer.xamarin.com/samples/xamarin-forms/Todo/>
2. Click on the “Download” button towards the top right corner and save the .zip file
3. Right click on the .zip file and select “Extract”
4. Extract the files to a new folder on your machine and double-click the .sln file to open the app

Note: towards the end of this document is a demo on how to setup the app and launch it.

# ToDo (Native with Portable Class Library)

**PCL** projects target specific profiles that support a known set of BCL classes/features. However, the down side to PCL is that they often require extra architectural effort to separate profile specific code into their own libraries. For a more detailed discussion on these two approaches, see the [Sharing Code Options guide](https://developer.xamarin.com/guides/cross-platform/application_fundamentals/building_cross_platform_applications/sharing_code_options/) .

**Tasky (Native w/ PCL and SQLite) sample app**

*To download the sample app:*

1. Navigate to <https://developer.xamarin.com/samples/mobile/TaskyPortable/>
2. Click on the “Download” button towards the top right corner and save the .zip file
3. Right click on the .zip file and select “Extract”
4. Extract the files to a new folder on your machine and double-click the .sln file to open the app

# ToDo (Native Shared Asset)

**Shared Asset Projects** use a single set of files and offers a quick and simple way in which to share code within a solution and generally employs conditional compilation directives to specify code paths for various platforms that will use it (for more information see the [Shared Projects article](https://developer.xamarin.com/guides/cross-platform/application_fundamentals/shared_projects/) and the [Setting up a Xamarin Cross-Platform Solution guide](https://developer.xamarin.com/guides/cross-platform/application_fundamentals/building_cross_platform_applications/sharing_code_options/) ).

**Tasky (Native Shared w/ SQLite) sample app**

*To download the sample app:*

1. Navigate to <https://developer.xamarin.com/samples/mobile/Tasky/>
2. Click on the “Download” button towards the top right corner and save the .zip file
3. Right click on the .zip file and select “Extract”
4. Extract the files to a new folder on your machine and double-click the .sln file to open the app

# ToDo (Forms) Sample App Demo

This demo demonstrates the Todo (Forms) list application, where the data is stored and accessed in a local SQLite database.

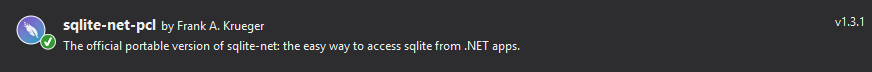
The app functionality is:

* View a list of tasks.
* Add a new item to the list of tasks.
* Set a task's status to 'completed'.

[Requirements](https://developer.xamarin.com/guides/xamarin-forms/getting-started/installation/)

In all cases, the tasks are stored in a local SQLite database.

1. To get started, download the project files from <https://developer.xamarin.com/samples/xamarin-forms/Todo/>
2. Build the project to restore NuGet Packages. You may run into some build errors.
3. Tools > NuGet Package Manager > Manage NuGet Packages for the solution.
4. Click on Updates Tab, and update “sqlite-net-pcl”.



1. (Optional) You may have additional updates to install that you may do so now.
   1. From an execution point-of-view, it was easier to start at the top of the listed updates and update them one by one until you reached the last 8 or so updates.
2. Build the project again and make sure all the errors have cleared.
3. In the Solution Explorer, right click on the Todo.UWP project > Debug > Start new instance. This will launch the UWP application in debug mode.
4. To use the app, click on the ellipsis “…” and then on the plus “+” icon in the top right corner
5. Enter a name, description, and click the Save button.
6. The entry is saved to the localDb.