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LERNEN xamarin

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#xamarin

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Über

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Kapitel 1: Erste Schritte mit Xamarin

Bemerkungen

In diesem Abschnitt erhalten Sie einen Überblick darüber, was Xamarin ist und warum ein Entwickler es verwenden möchte.

Es sollte auch alle großen Themen in Xamarin erwähnen und auf die verwandten Themen verweisen. Da die Dokumentation für Xamarin neu ist, müssen Sie möglicherweise erste Versionen dieser verwandten Themen erstellen.

Examples

Xamarin Studio unter OS X installieren

Um die Xamarin-Entwicklung auf einem OS X-Computer zu starten, müssen Sie zunächst die Community-Version von Xamarin Studio von der offiziellen Website herunterladen und installieren. Einige Felder müssen ausgefüllt werden, um das Installationsprogramm herunterzuladen (siehe Abbildung unten).

Dowr

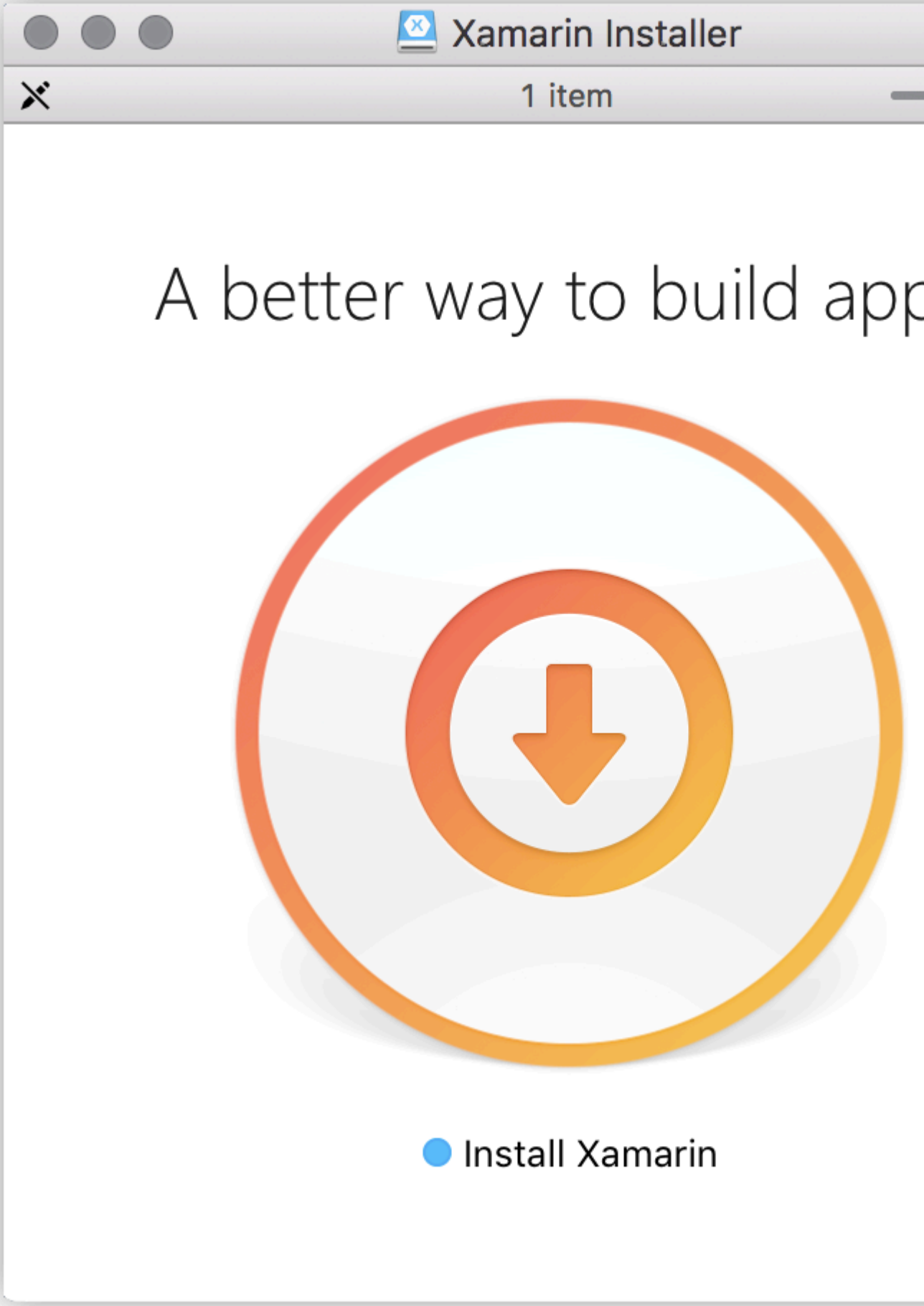
Nice! You are about to d

C# and sha

- Die neueste Version von Xcode aus dem Mac App Store oder der Apple Developer Website .
  Apple Developer Website .
- Mac OS X Yosemite (10.10) und höher

Installationsprozess

Sobald die Voraussetzungen erfüllt sind, führen Sie das Xamarin-Installationsprogramm aus, indem Sie auf das Xamarin-Logo doppelklicken.


Xamarin Installer
1 item
A better way to build app
Install Xamarin

https://riptutorial.com/de/xamarin/topic/899/erste-schritte-mit-xamarin

Kapitel 2: Code-Sharing zwischen Projekten

Examples

Das Brückenmuster

Das Bridge-Muster ist eines der grundlegendsten Inversion of Control-Entwurfsmuster. Bei Xamarin wird dieses Muster verwendet, um auf plattformabhängigen Code aus einem plattformunabhängigen Kontext zu verweisen. Beispiel: Verwenden des Android AlertDialogs aus einer Portable Class Library oder Xamarin Forms. Keiner dieser Kontexte weiß, was ein AlertDialog-Objekt ist, daher müssen Sie es in ein Feld einschließen, damit es verwendet werden kann.

```
// Define a common interface for the behavior you want in your common project (Forms/Other
PCL)
public interface IPlatformReporter
{
    string GetPlatform();
}


// In Android/iOS/Win implement the interface on a class
public class DroidReporter : IPlatformReporter
{
    public string GetPlatform()
    {
        return "Android";
    }
}


public class IosReporter : IPlatformReporter
{
    public string GetPlatform()
    {
        return "iOS";
    }
}


// In your common project (Forms/Other PCL), create a common class to wrap the native
implementations
public class PlatformReporter : IPlatformReporter
{
    // A function to get your native implemenation
    public static func<IPlatformReporter> GetReporter;

    // Your native implementation
    private IPlatformReporter _reporter;

    // Constructor accepts native class and stores it
    public PlatformReporter(IPlatformReporter reporter)
    {
        _reporter = GetReporter();
    }
```

```
    // Implement interface behavior by deferring to native class
    public string GetPlatform()
    {
        return _reporter.GetPlatform();
    }
}


// In your native code (probably MainActivity/AppDelegate), you just supply a function that
returns your native implementation
public class MainActivity : Activity
{
    protected override void OnCreate(Bundle bundle)
    {
        base.OnCreate(bundle);
        SetContentView(Resource.Layout.activity_main);

        PlatformReporter.GetReporter = () => { return new DroidReporter(); };
    }
}


public partial class AppDelegate : UIApplicationDelegate
{
    UIWindow window;

    public override bool FinishedLaunching(UIApplication app, NSDictionary options)
    {
        window = new UIWindow(UIScreen.MainScreen.Bounds);
        window.RootViewController = new UIViewController();
        window.MakeKeyAndVisible();

        PlatformReporter.GetReporter = () => { return new IosReporter(); };

        return true;
    }
}


// When you want to use your native implementation in your common code, just do as follows:
public void SomeFuncWhoCares()
{
    // Some code here...

    var reporter = new PlatformReporter();
    string platform = reporter.GetPlatform();

    // Some more code here...
}
```

Das Service Locator Pattern

Das Service Locator-Entwurfsmuster ist nahezu abhängig von der Injektion von Abhängigkeiten. Wie das Brückenmuster kann dieses Muster verwendet werden, um auf plattformabhängigen Code aus einem plattformunabhängigen Kontext zu verweisen. Interessanterweise beruht dieses Muster auf dem Singleton-Muster - alles, was Sie in den Service Locator stellen, ist ein defekter Singleton.

```
// Define a service locator class in your common project
public class ServiceLocator {
    // A dictionary to map common interfaces to native implementations
    private Dictionary<object, object> _services;

    // A static instance of our locator (this guy is a singleton)
    private static ServiceLocator _instance;

    // A private constructor to enforce the singleton
    private ServiceLocator() {
        _services = new Dictionary<object, object>();
    }

    // A Singleton access method
    public static ServiceLocator GetInstance() {
        if(_instance == null) {
            _instance = new ServiceLocator();
        }

        return _instance;
    }

    // A method for native projects to register their native implementations against the
common interfaces
    public static void Register(object type, object implementation) {
        _services?.Add(type, implementation);
    }

    // A method to get the implementation for a given interface
    public static T Resolve<T>() {
        try {
            return (T) _services[typeof(T)];
        } catch {
            throw new ApplicationException($"Failed to resolve type: {typeof(T).FullName}");
        }
    }


//For each native implementation, you must create an interface, and the native classes
implementing that interface
public interface IA {
    int DoAThing();
}


public interface IB {
    bool IsMagnificent();
}


public class IosA : IA {
    public int DoAThing() {
        return 5;
    }
}


public class DroidA : IA {
    public int DoAThing() {
        return 42;
    }
```

```
}


// You get the idea...


// Then in your native initialization, you have to register your classes to their interfaces
like so:
public class MainActivity : Activity
{
    protected override void OnCreate(Bundle bundle)
    {
        base.OnCreate(bundle);
        SetContentView(Resource.Layout.activity_main);

        var locator = ServiceLocator.GetInstance();
        locator.Register(typeof(IA), new DroidA());
        locator.Register(typeof(IB), new DroidB());
    }
}


public partial class AppDelegate : UIApplicationDelegate
{
    UIWindow window;

    public override bool FinishedLaunching(UIApplication app, NSDictionary options)
    {
        window = new UIWindow(UIScreen.MainScreen.Bounds);
        window.RootViewController = new UIViewController();
        window.MakeKeyAndVisible();

        var locator = ServiceLocator.GetInstance();
        locator.Register(typeof(IA), new IosA());
        locator.Register(typeof(IB), new IosB());

        return true;
    }
}


// Finally, to use your native implementations from non-native code, do as follows:
public void SomeMethodUsingNativeCodeFromNonNativeContext() {
     // Some boring code here


     // Grabbing our native implementations for the current platform
     var locator = ServiceLocator.GetInstance();
     IA myIA = locator.Resolve<IA>();
     IB myIB = locator.Resolve<IB>();


    // Method goes on to use our fancy native classes
}
```

Code-Sharing zwischen Projekten online lesen: https://riptutorial.com/de/xamarin/topic/6183/code-sharing-zwischen-projekten

Kapitel 3: Objektvalidierung durch Anmerkungen

Einführung

mvc.net führt Datenanmerkungen zur Modellvalidierung ein. Dies kann auch in Xamarin gemacht werden

Examples

Einfaches Beispiel

Fügen Sie das Nuget-Paket `System.ComponentModel.Annotations`

Definiere eine Klasse:

```
public class BankAccount
{

   public enum AccountType
   {
       Saving,
       Current
   }

   [Required(ErrorMessage="First Name Required")]
   [MaxLength(15,ErrorMessage="First Name should not more than 1`5 character")]
   [MinLength(3,ErrorMessage="First Name should be more than 3 character")]
   public string AccountHolderFirstName { get; set; }

   [Required(ErrorMessage="Last Name Required")]
   [MaxLength(15,ErrorMessage="Last Name should not more than 1`5 character")]
   [MinLength(3,ErrorMessage="Last Name should be more than 3 character")]
   public string AccountHolderLastName { get; set; }

   [Required]
   [RegularExpression("^[0-9]+$", ErrorMessage = "Only Number allowed in AccountNumber")]
   public string AccountNumber { get; set; }

   public AccountType AcType { get; set; }
}
```

Definieren Sie einen Validator:

```
public class GenericValidator
{
    public static bool TryValidate(object obj, out ICollection<ValidationResult> results)
    {
        var context = new ValidationContext(obj, serviceProvider: null, items: null);
        results = new List<ValidationResult>();
        return Validator.TryValidateObject(
```

```
            obj, context, results,
            validateAllProperties: true
        );
    }
}
```

Verwenden Sie den Validator:

```
var bankAccount = new BankAccount();
ICollection<ValidationResult> lstvalidationResult;

bool valid = GenericValidator.TryValidate(bankAccount, out lstvalidationResult);
if (!valid)
{
    foreach (ValidationResult res in lstvalidationResult)
    {
        Console.WriteLine(res.MemberNames +":"+ res.ErrorMessage);
    }

}
Console.ReadLine();
```

Ausgabe generiert:

```
First Name Required
Last Name Required
The AccountNumber field is required.
```

Objektvalidierung durch Anmerkungen online lesen:
https://riptutorial.com/de/xamarin/topic/9720/objektvalidierung-durch-anmerkungen

Credits

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