Reviewer Guide

embarcadero

RAD Studio XE4

Product Reviewer's Guide

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Overview

Thank you for your interest in reviewing RAD Studio XE 4, Embarcadero's multi-device, true native app development solution for creating true native apps for Windows, Mac, and iOS with one source code base. This reviewer's guide will give you an overview of some of the key benefits that developers will enjoy with RAD Studio XE4 as well as a walkthrough by building typical multi-device apps.

Companies are under pressure to deliver apps that their customers can use in the office and on the road, but coding and managing these different versions can be costly and time-consuming. RAD Studio is the app development suite for companies that need to create true native apps for PCs, tablets, and smartphones and get them to market fast. With RAD Studio, you manage one codebase, one team, and one schedule, but support multiple platforms without sacrificing performance and user experience. True native apps run directly on the device with full access to all underlying capabilities, tighter security, and a better user experience.

Please keep in mind that this Reviewer's Guide is a starting point on the road to reviewing RAD Studio XE4. There are tons of features in the product. There is a wealth of additional information, videos, walkthroughs, and guides to help you get the most out of the product. Please review the full feature matrix, the RAD Studio XE4 product page and the Embarcadero Developer Network for the latest on the product.

Key Features and Benefits for Developers

Multi-Device

Multi-Device app development means developers don't have to support multiple development projects to deliver their apps natively on multiple platforms (iOS, Windows, and Mac). Most vendors who support multi-device development do so via web technologies, scripting or VMs, which are not as optimal as our true native solution. Many of these vendors focus on mobile development solutions that do not support the creation of PC apps for Windows and Mac.

RAD Studio, on the other hand, makes it easy to build script-free true native apps for multiple devices that expose the full range of capabilities and performance in the underlying devices. Building their app in RAD Studio eliminates the need to engage in multiple development efforts for the same application on multiple devices. This means they get to market faster on multiple devices for the first release – and every release after that – while keeping costs down.

True Native

True Native app development lets developers deliver script-free device native apps optimized for each underlying hardware platform – creating faster, richer apps that end users love. Many other tool vendors are using the term "native" app development to describe web technologies and scripts wrapped into an app package to deliver an app-like user experience. This approach means that developers are limited in both performance and capabilities.

However, true native apps in RAD Studio are script-free and run directly on hardware CPU delivering the following advantages:

- Fast – Uncompromised native device performance with full native API and CPU control when you need it, and not limited by or slowed by script interpreters and VMs.
- Predictable – Apps run directly on the device CPU, as intended by the device vendors, and are not slowed by additional software layers and random garbage collection.
- Better User Experience (UX) – Apps take full advantage of device capabilities and performance.

Rapid Prototyping

Rapid Prototyping lets you create a visual prototype, incorporate feedback, and get your app to market fast. Most visual prototyping environments only create a visual mock-up; they do not generate a working prototype. This means clients and team members can't truly experience the app concept and developers also must start from scratch when moving from prototype to development.

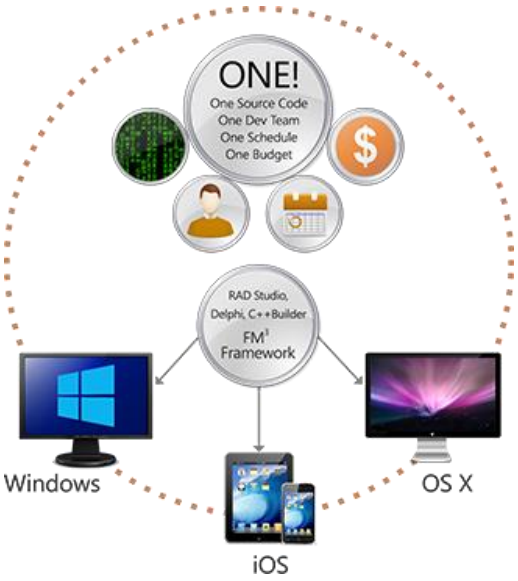
Rapid Prototyping in RAD Studio lets developers or designers quickly create no-code visual mockups with live data or simulated data and deploy to actual target devices (PC, phone, tablet) or simulate on Windows or Mac giving clients and team members a far more accurate and impressive prototype experience. RAD Studio prototypes use actual framework objects, so developers can go from prototype to development without wasted effort, saving development time and resources.

High Security

Many app development vendors use Java, JavaScript, and WebKit runtimes which are notorious hacker targets presenting inherent security risks on mobile devices. RAD Studio allows for true native app development, so your code runs directly on the device, reducing the risk of third party attacks.

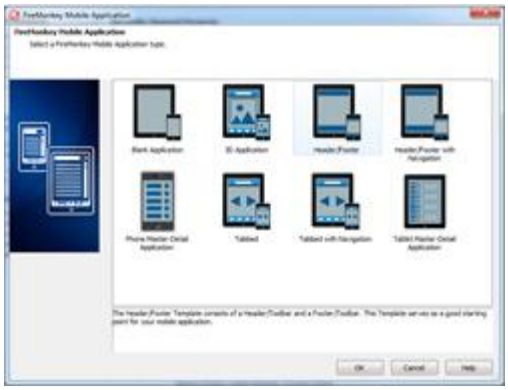
What's New in RAD Studio XE4

RAD Studio XE4 delivers the best in multi-device development for PCs, tablets and smartphones. Use the new features of RAD Studio XE4 to deliver apps for iPhone and iPad in addition to Windows and Mac, connect with more data, more easily, and much more!



Multi-device, true native app development

RAD Studio's multi-device app development solution means you don't have to support multiple development projects to deliver your apps natively on multiple platforms (iOS, Windows and Mac OS X). RAD Studio XE4 makes it easy to build script-free true native apps for multiple devices that expose the full range of capabilities and performance in the underlying devices. Learn More >



Develop apps for iPhone and iPad

Create mobile apps using the programming skills, knowledge and code that you already have. Your RAD Studio Delphi iOS apps will have fast native performance and better security than web-based or scripting language based apps. Use a full visual designer for iOS user interfaces with multiple device types, resolutions, and orientations. Learn more >

iOS user interface controls

With Delphi in RAD Studio XE4, you get a full range of native styled user interface controls, including buttons, listboxes and combo boxes, to incorporate into your apps. The iOS apps you create include native controls like the date picker and custom picker, different keyboard types, services like notifications, and support for Share Sheet to print and share via social media, email and direct communication with other apps. Learn more >

Rapid prototyping

RAD Studio XE4 delivers an enhanced and optimized developer workflow for mobile development that automates deployment and debugging on both the simulator and device. Rapidly prototype your apps with layouts for each device type and quickly go from prototype to production. Integrate feedback quickly by deploying your prototype directly onto your target device using actual framework objects and code. Learn more >

IBLite and SQLite iOS database support

RAD Studio XE4 includes iOS local database support for SQLite and embedded InterBase via dbExpress, FireDAC and IBX. You also get a free development and free unlimited deployment license for IBLite for iOS – a new edition of the popular embedded InterBase ToGo database. Learn more >

Multi-tier client support for DataSnap, web services and enterprise databases

RAD Studio XE4 includes ISV and enterprise-class integrated database connectivity, middleware and cloud computing via dbExpress and FireMonkey. You get integrated support for SQL Server, Oracle, Sybase, DB2, InterBase, SQL Anywhere, SQLite, MySQL, and many more embedded and server databases as well as cloud services including Windows Azure and Amazon Web Services. Learn more >

Access more databases, on more devices, more easily with FireDAC

FireDAC gives you native high-speed direct access from Delphi and C++Builder to InterBase, SQLite, MySQL, SQL Server, Oracle, PostgreSQL, DB2, SQL Anywhere, Advantage DB, Firebird, Access, Informix, DataSnap and many more local/embedded, mobile and enterprise databases. Easily migrate from BDE and other technologies. Learn more >

FireMonkey FM³ Application Platform

RAD Studio XE4 leverages FireMonkey® FM³, the next generation platform for building multi-device, true native apps from a single C++ or Delphi codebase. You code once and the framework takes care of optimizing your app for multiple target platforms. Visual components give you extendable and reusable building blocks for faster and highly maintainable development. Learn more >

And much, much more…

See a comprehensive list of what's new in RAD Studio XE4 on the Embarcadero doc wiki. Learn more >

Video: What's New in RAD Studio and Delphi XE4

Take a tour of some of the new features of RAD Studio and Delphi XE4 for developing iOS mobile applications. Click to watch

What's New in RAD Studio and Delphi XE4
What's new in Delphi and RAD Studio XE4
0:00 / 3:27
HD
YouTube

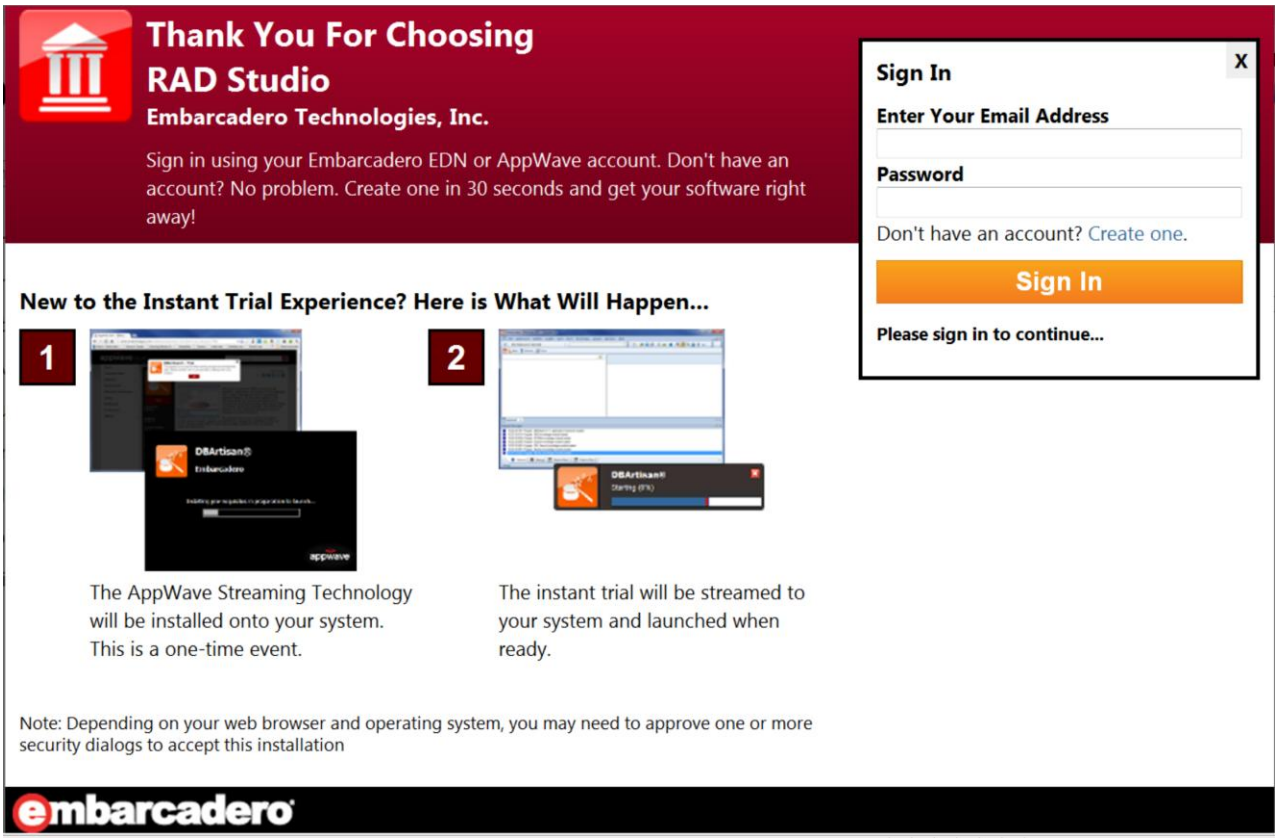
RAD Studio XE4 Walkthrough

Installing RAD Studio XE4

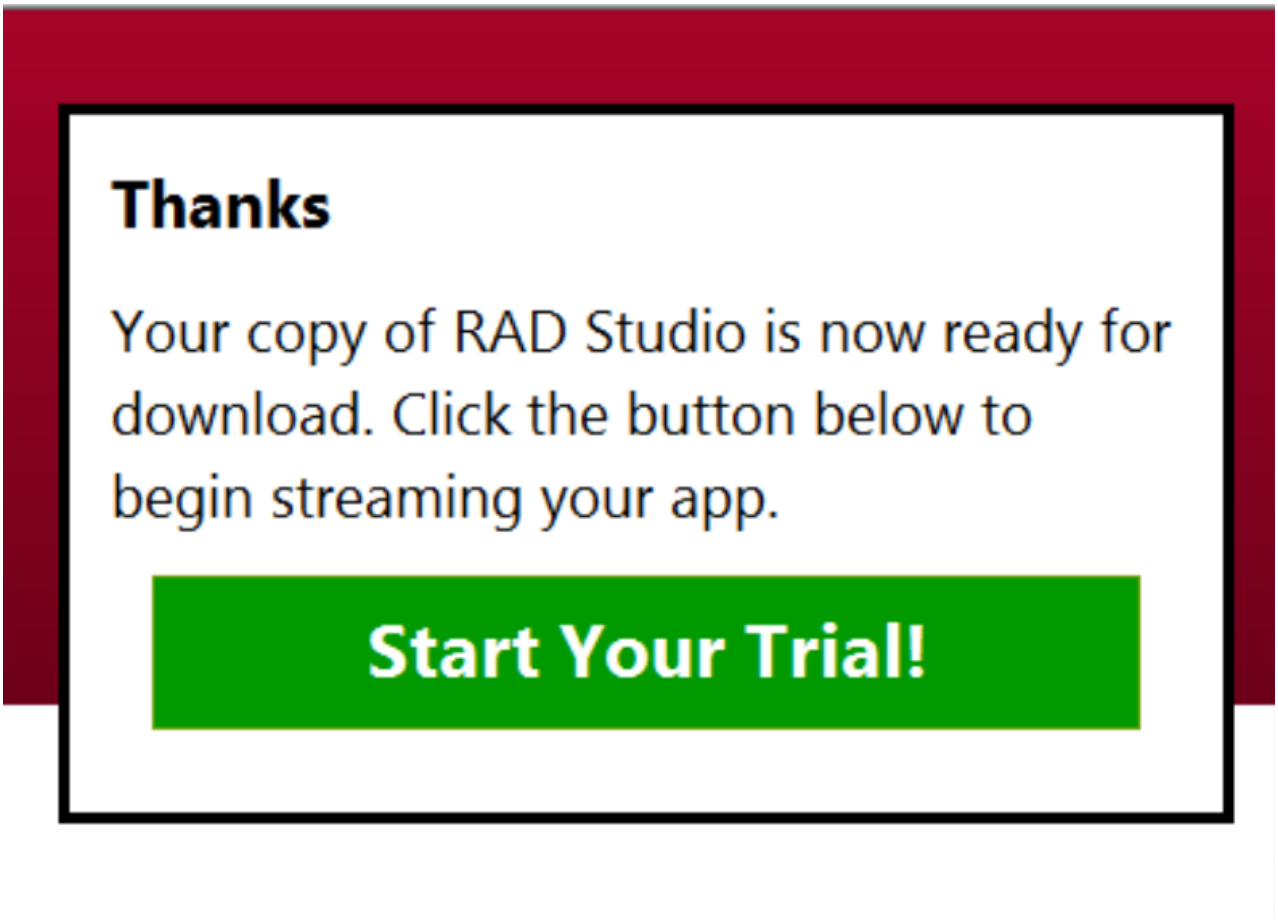
You may obtain XE4 Trial as a download or an instant trial. A download and install can take approximately 1 hour depending on your download speed. An instant trial typically takes less than 10 minutes depending on your download speed. Therefore, we recommend an instant trial for this product review.

To start your instant trial, visit this URL from your Windows machine:
http://windowsapps.com/rad-studio-trial.html?trial=1

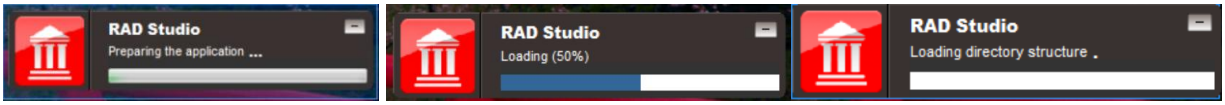
You will be presented with the following screen and a request to login with your Embarcadero Developer Network (EDN) email address and password. If you do not have an EDN account you can quickly create one from this screen.



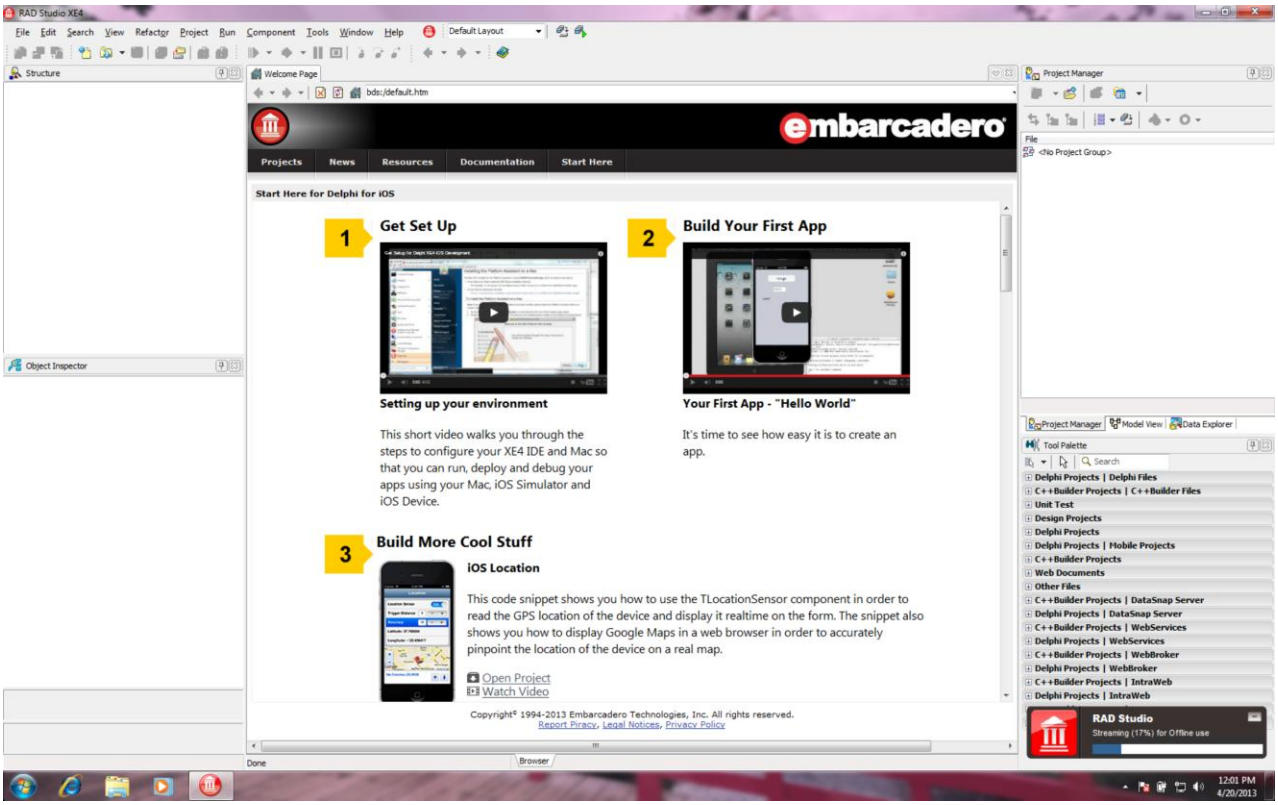
Once you sign in you may begin your instant trial by selecting "Start Your Trial."



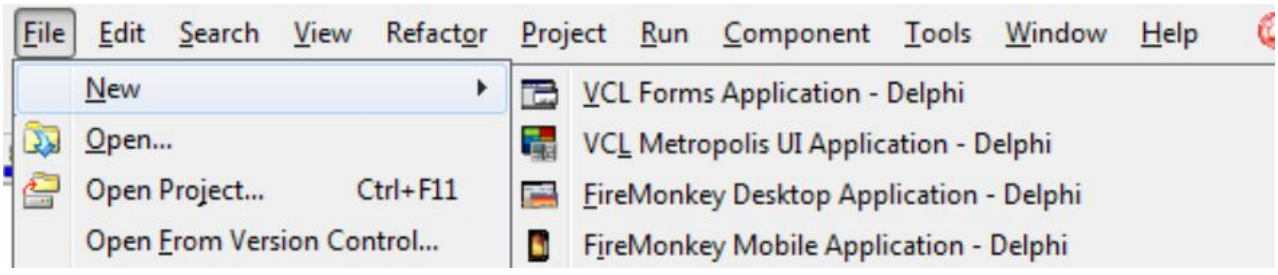
At this point the streaming technology, AppWave, will be downloaded and installed, then the streaming will begin. Please accept all prompts to move forward. After AppWave is installed, the trial begins to be streamed and you will see the following progress indicator at the bottom-right.

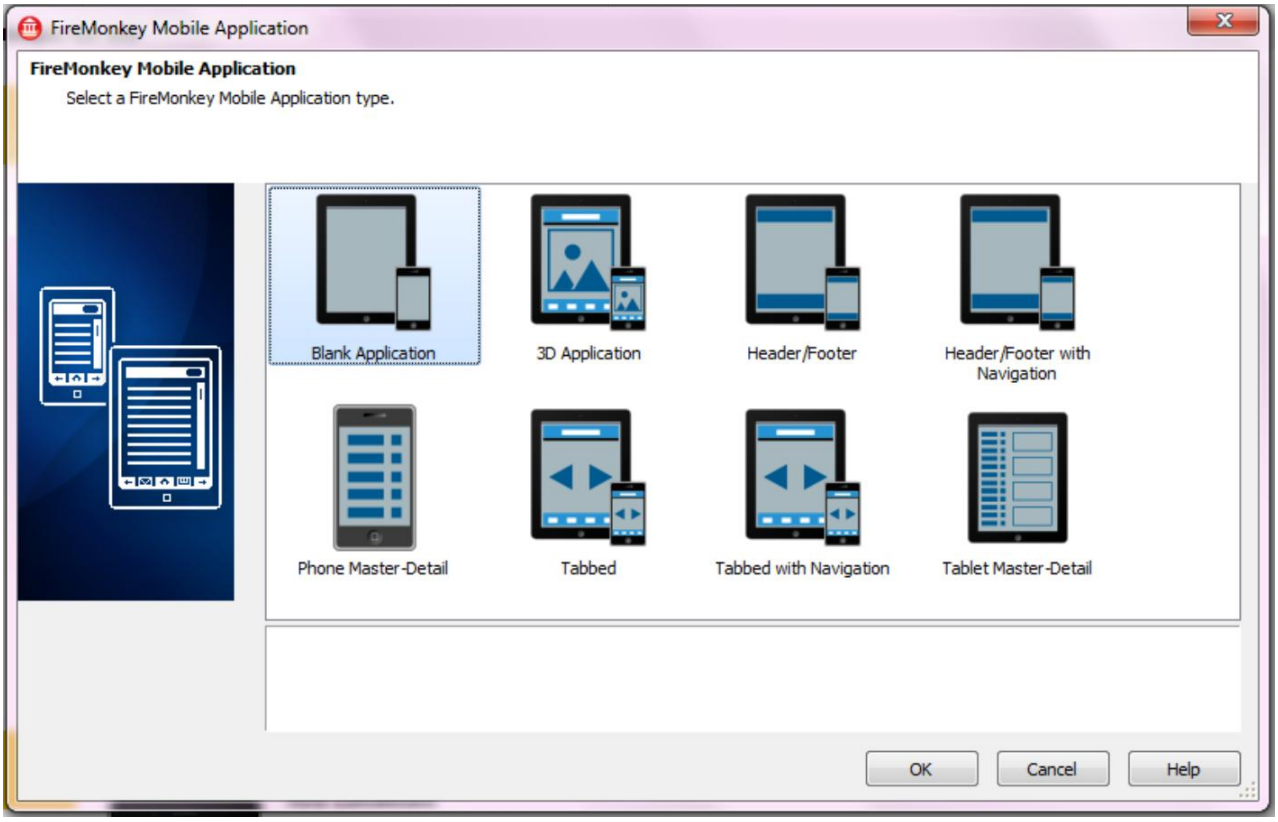


Shortly after this point the RAD Studio XE4 IDE will load and you are now ready to review the product. You will be presented with a Start Here welcome page. Creating apps for iOS requires a little bit of setup on a connected Mac so it is highly recommended that you watch the Get Set Up video.

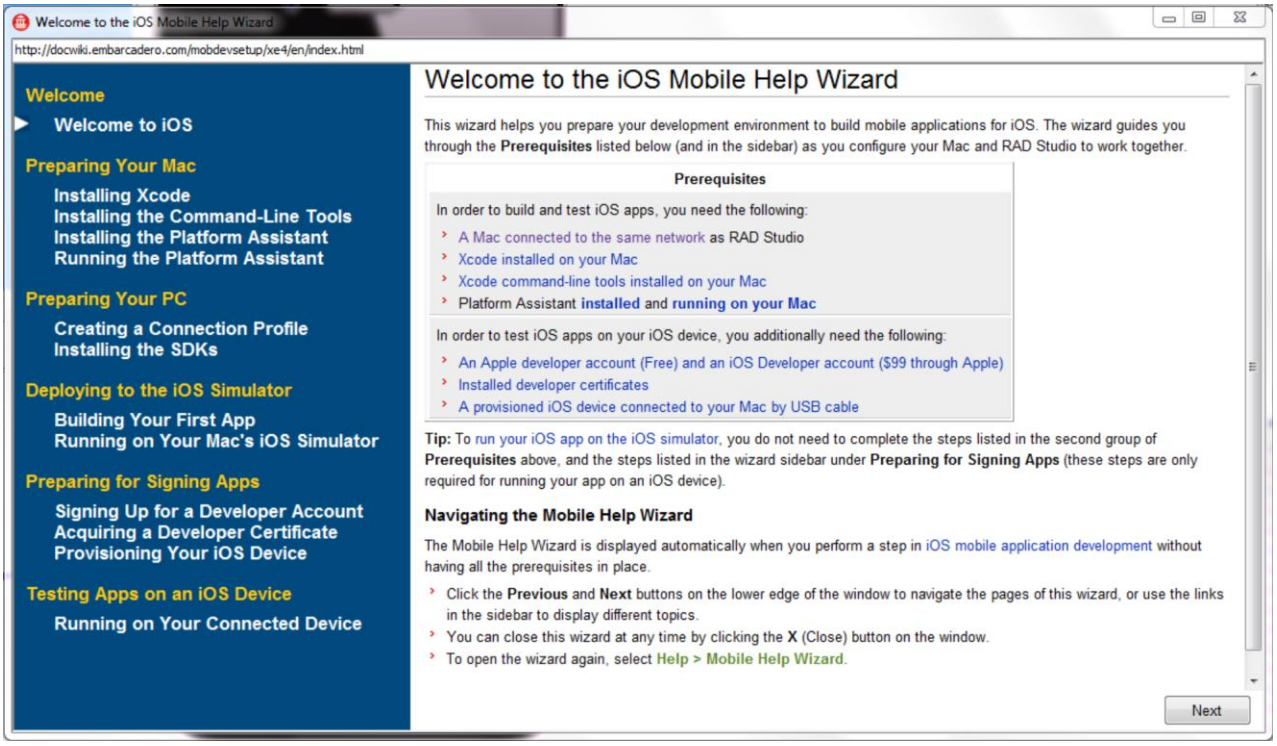


Alternatively, you can go through the detailed iOS Mobile Help Wizard setup tutorial by creating your first FireMonkey Mobile Application which is accessed from the File | New menu.





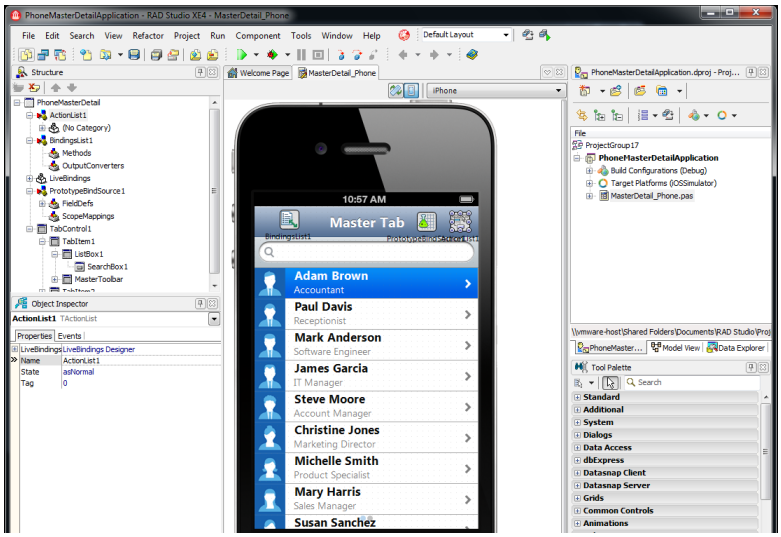
This tutorial allows you to work at your own pace.



Multi-Device App Development

After installing RAD Studio XE4, you will have the opportunity to decide what application(s) you want to build:

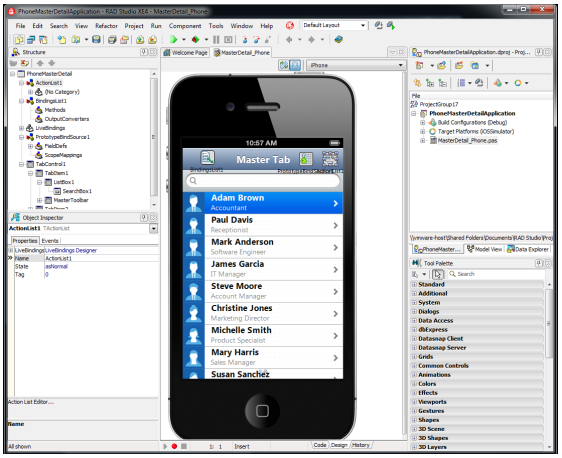
Rich GUI client apps
HD and 3D apps
Windows apps
Mac OS X apps
iOS apps
Local and Remote database apps
Advanced multi-tier servers
Web services based server
Cloud-enabled servers
Web-based applications
And many others



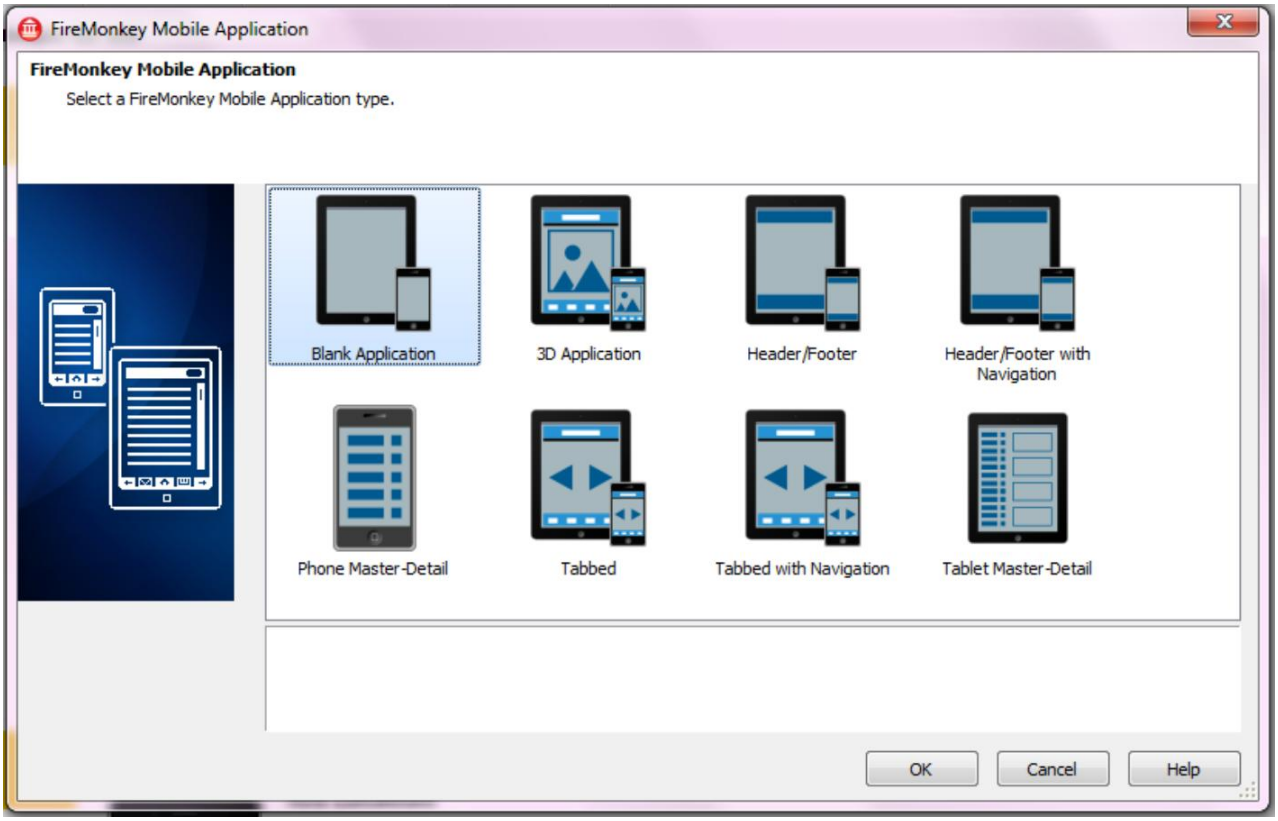
RAD Studio XE4 supports building almost any type of native app imaginable but we'll focus on a multi-device client app for this review.

Your first multi-device app

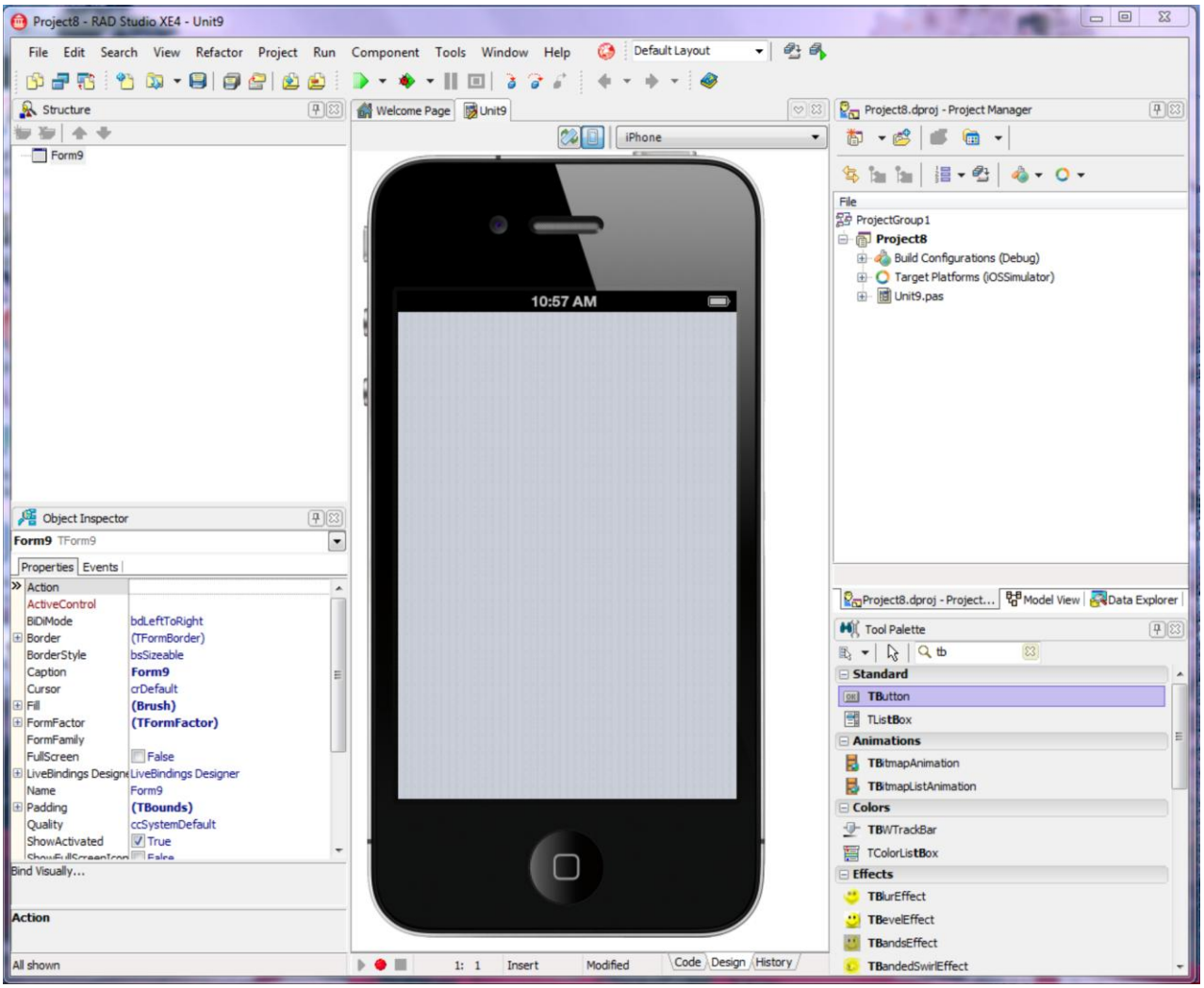
Note: This example requires the setup instructions were followed and completed at least to the point where an iOS app is deployable to a simulator. Deploying to device (which requires and Apple developer account, certificates, and a provisioned device) is not required for the example.



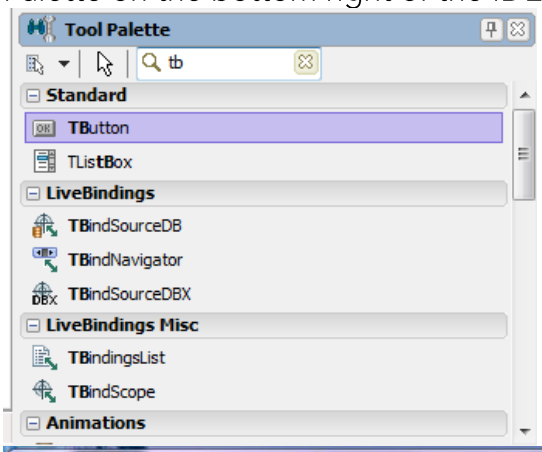
1) First, we will target mobile first by creating simple iOS client application. Select File | New | FireMonkey Mobile Application – Delphi. Select Blank Application from the available app templates.

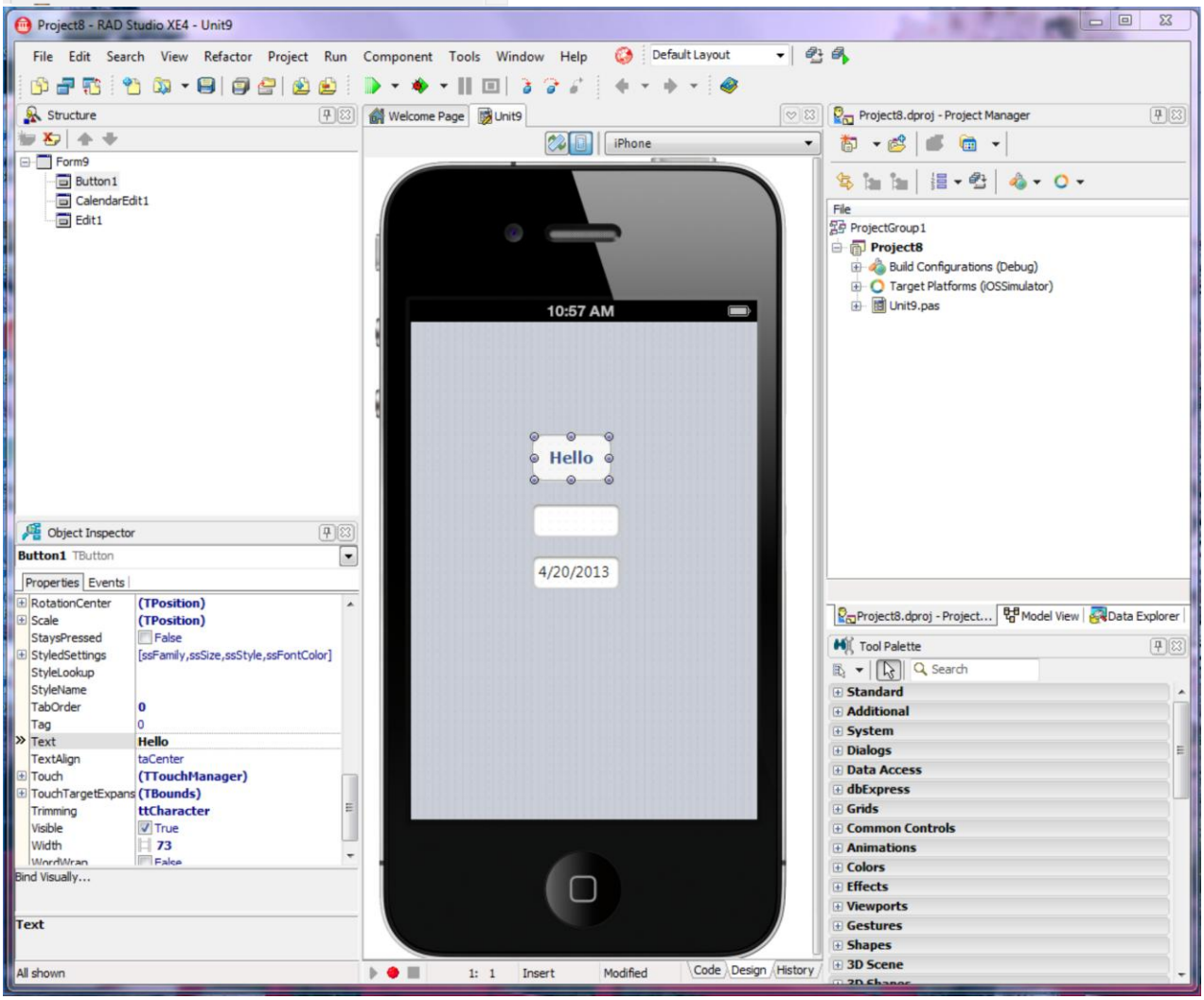


2) You will be presented with a designer for visually prototyping and creating your iOS application.



3) Drag and drop one TButton, one TEdit, and one TCalendarEdit component on the form. You can find these components by typing the component name into the Tool Palette on the bottom right of the IDE.



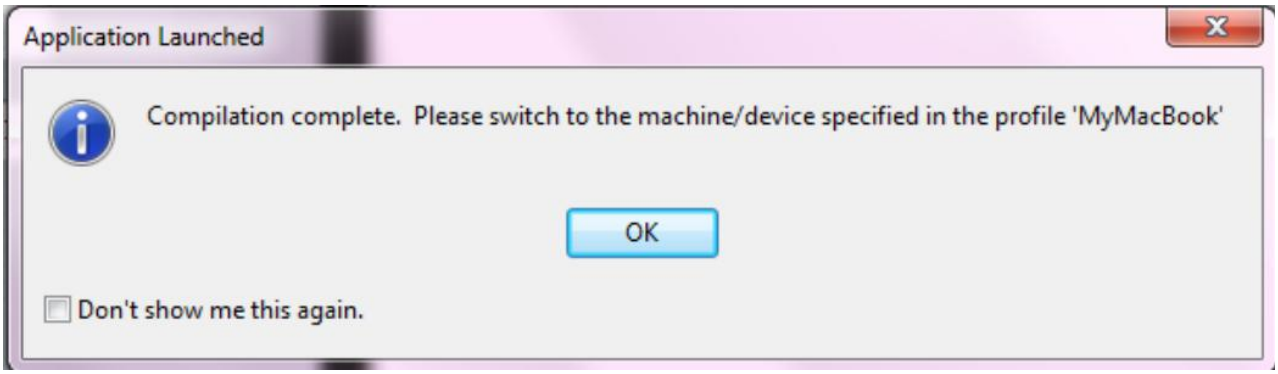


4) Change the text of TButton1 to "Hello" by selecting the component in the designer and typing 'Hello' into the Text property of that component. Double click on that button and add the following code into the generated event handler.
ShowMessage ('Delphi on iOS');

```
procedure TForm9.Button1Click(Sender: TObject);
begin
  ShowMessage ('Delphi on iOS');
end;
```

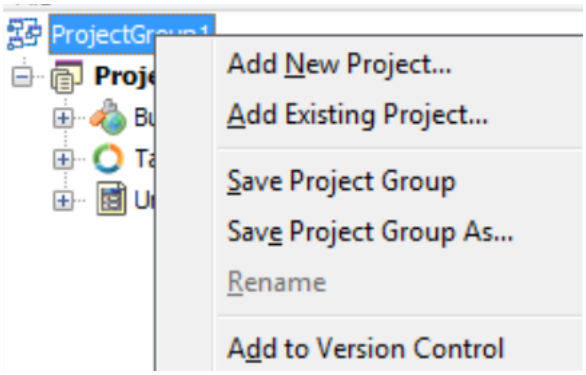
5) Now, let's build and deploy this on the iOS simulator. (Please ensure you have followed the setup tutorial and have a working Platform Assistant Server connection).

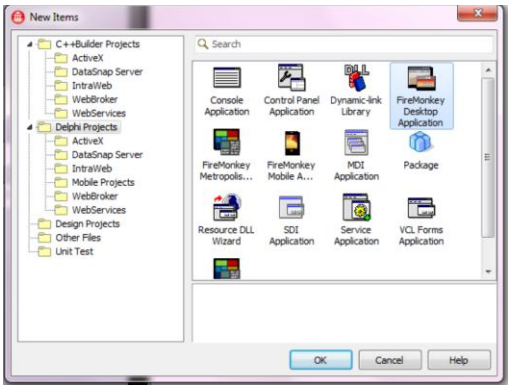
6) After you build and deploy the application you will see the following information dialog.



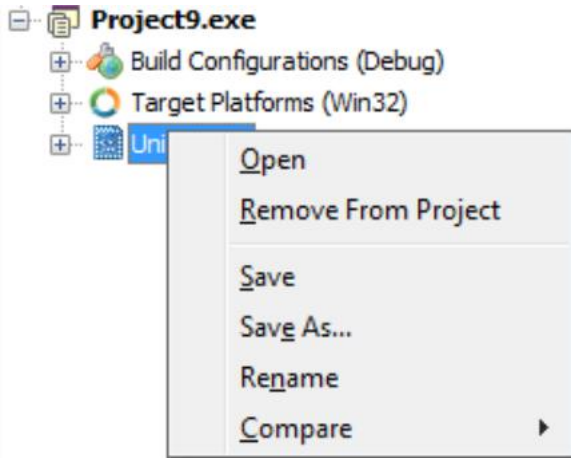
7) Go to your Mac desktop that you setup in your Connection Manager Profile and you will see the FireMonkey application running in your simulator. By interacting with the controls, you will notice the following: The CalendarEdit controls uses the native iOS DateTime picker; the Button display its message in a native iOS dialog; and the Edit control supports native iOS functionality like selection and cut/copy/paste.

8) To make this application multi-device and target PC operating systems, we will create a new project in our projectgroup and share the exact same source code. Right click on your ProjectGroup in the Project Manager at the top-right of the IDE and select Add New Project. In the New Items Dialog, select FireMonkey Desktop Application from the Delphi Projects folder. The click OK.

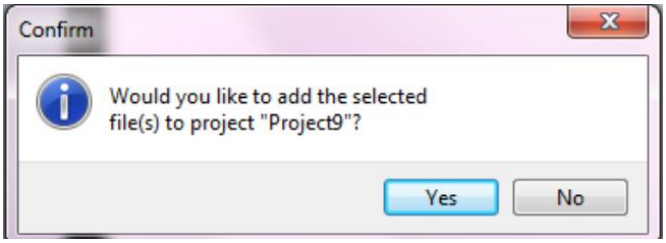




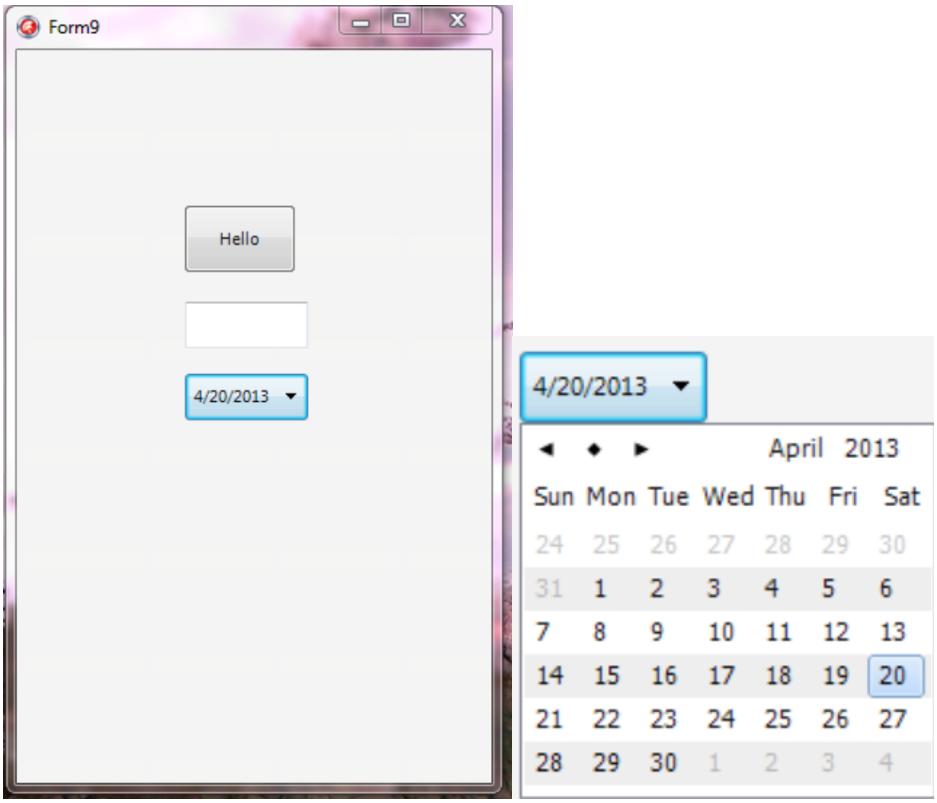
9) Delete the main source file from the new Project by right-clicking on that file and selecting remove from project.



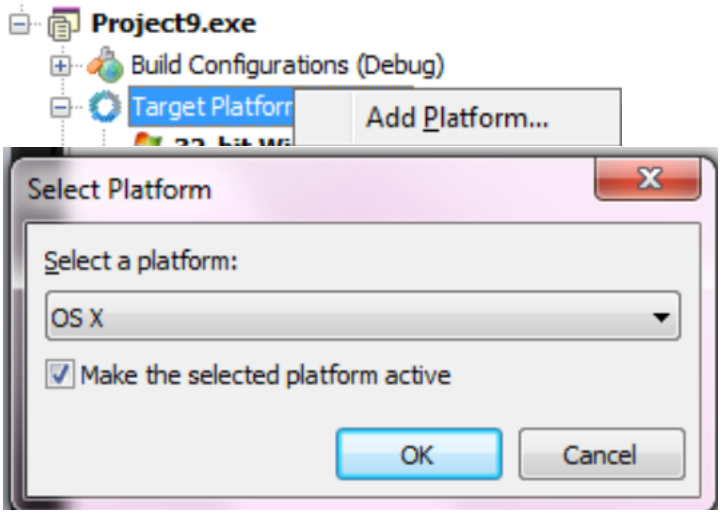
10) Now copy the app file from your iOS project by selecting it in the iOS project and dragging it to the new Project.



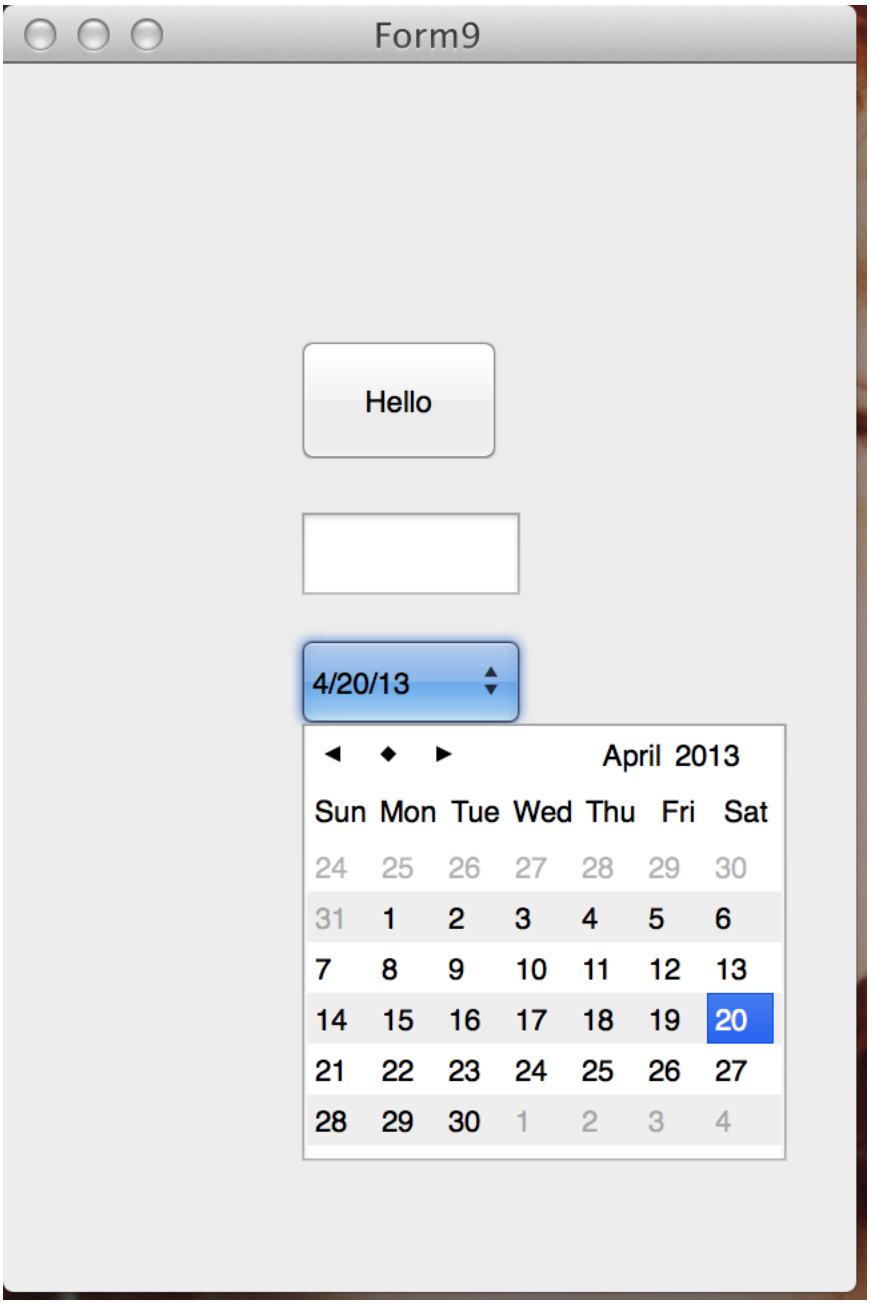
11) Build and run the project with the F9 key and you will see the application loading on your Windows 32-bit desktop. Notice, that FireMonkey renders with Windows controls.



12) Finally, let's build and deploy this application for Mac OS X by adding the platform. To add the platform, right click on the Target Platform node and select Add Platform. Select Mac OS X from the Select Platform dialog and make the selected platform active.



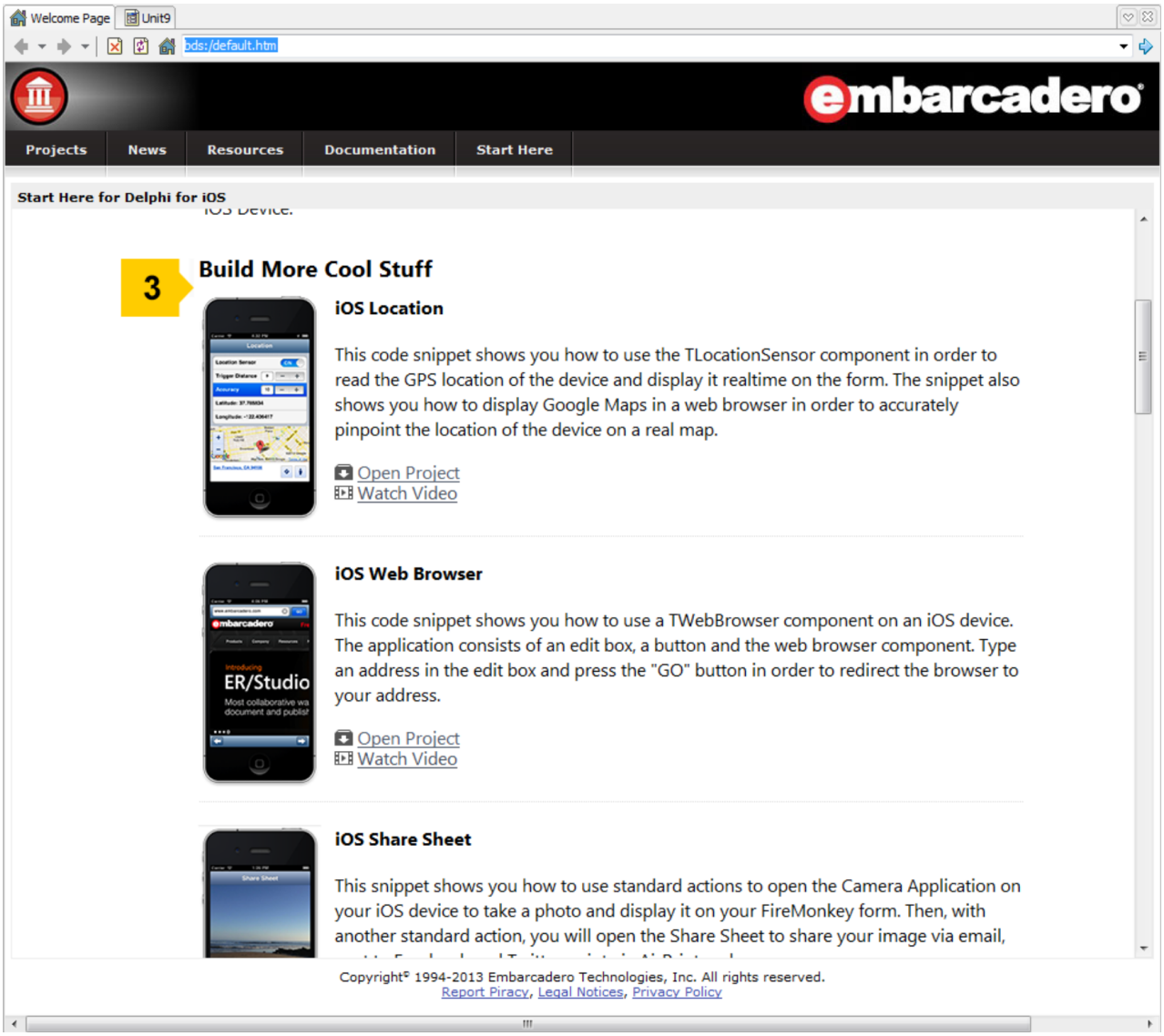
13) After building and deploying your application go back to your Mac OS X desktop that you setup in your Connection Profile and you will see your app running.



14) Congratulations! You just created your first Multi-Device, True-Native app for Windows, Mac, and iOS visually and with the exact same source code base.

15) Take a look at plenty of other example projects in your Start Here welcome page by opening the project from the provided link. You should also go through the final steps to setup your device and deploy to device.

Thank you for your review of RAD Studio XE4 the first Multi-Device, True-Native app development solution.



RAD STUDIO XE4 Additional Information

RAD Studio XE4 is a product suite that includes Delphi XE4, C++Builder XE4, HTML5 Builder, and InterBase.

RAD Studio XE4 Data Sheet
Delphi XE4 Data Sheet
C++Builder XE4 Data Sheet
HTML 5 Builder Data Sheet
InterBase Data Sheet

Product Editions

RAD Studio XE4 is available in four editions – Professional, Enterprise, Ultimate and Architect.
See the RAD Studio XE4 full Feature Matrix for a more detailed comparison

Feature	Architect	Ultimate	Enterprise	Professional
Multi-Device Development	Develop iOS, Windows and Mac device native apps with Delphi and C++Builder. Develop Web and mobile web apps with HTML5 Builder.			
Database Application Architectures	Client/Server, n-Tier, Local/Embedded			Local/Embedded
Database and Cloud Support	InterBase, SQL Server, Oracle, DB2, Sybase, MySQL, ODBC and more. Amazon and Azure cloud. DataSnap multi-tier. FireDAC data access components.			InterBase, MySQL and SQLite. Amazon and Azure Cloud.
IDE Tools	Advanced with refactoring, unit testing and full UML modeling			Advanced with refactoring, unit testing, UML visualization

Feature	Architect	Ultimate	Enterprise	Professional
Advanced database modeling and SQL tools	ER/Studio Developer Edition	DB PowerStudio Dev Edition	Not included	
Earlier version access	Get licenses and downloads for earlier versions Delphi and C++Builder XE3, XE, 2010, 2009, 2007, Delphi 7, C++Builder 6, RadPHP XE2 and RadPHP XE			
Included IDE personalities	Delphi, C++Builder and HTML5 Builder			

RAD Studio XE4 Professional

Embarcadero® RAD Studio XE4 Professional is the multi-device, true native app development suite for ISVs who need to create true native apps for PCs, tablets, and smartphones with local and embedded database connectivity. Manage one codebase, one team, and one schedule without sacrificing performance. True native apps give you more control, tighter security, and a better user experience. RAD Studio Professional features include:

- Multi-device, cross-platform development for Windows, Mac and iOS using the FireMonkey application platform
- 64-bit Delphi and C++ development
- dbExpress local database connectivity to InterBase® and MySQL in Delphi and C++Builder
- Earlier version licenses and software for Delphi 7, 2007, 2009, 2010, XE, XE2 and XE3; C++Builder 6, 2007, 2009, 2010, XE, XE2 and XE3; and RadPHP XE and XE2 at no extra cost
- Cloud computing integration with Amazon EC2 and Windows Azure
- UML code visualization, providing a visual representation of source code for easier understanding

RAD Studio XE4 Enterprise

Embarcadero® RAD Studio XE4 Enterprise is the multi-device, true native app development suite for ISVs and enterprises who need to create apps for PCs, tablets, and smartphones with client/server and n-tier capabilities, enterprise database and cloud connectivity to SQL Server, DB2, Oracle, Sybase, InterBase, Azure & Amazon, and DataSnap multi-tier technology. RAD Studio Enterprise includes everything in the

Professional edition, plus the following for building client/server and multi-tier database and Web applications:

- Database server connectivity to InterBase, Firebird, MySQL, Microsoft SQL Server, Oracle, DB2, Informix, Sybase ASE, SQL Anywhere, and ODBC
- New FireDAC enterprise database connectivity
- DataSnap multi-tier application development and PHP DataSnap client development
- Full two-way UML modeling capabilities with multiple diagram types, synchronization between code and models, documentation generation, and design patterns

RAD Studio XE4 Ultimate

Embarcadero® RAD Studio XE4 Ultimate is the multi-device, true native app development suite for enterprises that need to create database-intensive, true native apps for PCs, tablets, and smartphones that interface with enterprise database systems. In addition, RAD Studio Ultimate includes SQL development, database change management, SQL profiling, and SQL tuning tools with DB PowerStudio®. RAD Studio Ultimate includes Enterprise edition plus DB PowerStudio tools that enable you to:

- Write high quality SQL faster with Rapid SQL
- Visually tune SQL with DB Optimizer Pro
- Simplify database change management with DB Change Manager

RAD Studio XE4 Architect

Embarcadero® RAD Studio XE4 Architect is the multi-device, true native app development suite for enterprises that need to create true native apps for PCs, tablets, and smartphones that integrate with enterprise database systems. It also includes visual data modeling to help developers get the most value out of enterprise databases and data structures. RAD Studio Architect includes everything in the Enterprise edition plus powerful database modeling and design capabilities:

- Reverse-engineer, analyze, and optimize databases
- Automatically generate database code from models for forward engineering
- Create logical and physical models based on information extracted from databases and script files
- Work with highly readable and navigable diagrams
- Advanced compare and merge with bidirectional comparisons and merges of model and database structures.

RAD Studio XE4 in Embarcadero All-Access XE

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