Introduction

Many developers became interested in programming because they saw a video game and thought, "How did they do that?" This book helps demystify what is required to make video games. Being able to write games on a next-generation console like the Xbox 360 has never been an option for the masses before. Now with the XNA Framework, games can be written for the console.

By the end of the book, readers will have created two complete games and many demos along the way. This book takes a serious look at performance-related issues when writing games using XNA for Windows and the Xbox 360. It devotes two chapters to the High Level Shader Language (HLSL), which is a necessity for writing great games. It covers physics and artificial intelligence (AI). It also covers special effects, including explosions, transitions, and how to create a 3D particle system. It also demonstrates how to create a sound project using the Microsoft Cross-Platform Audio Tool (XACT) and how to integrate the sound into the game. Saving and loading a high score list and creating full menu system are also taught in this book. In general, this book contains a great foundation for many topics that need to be learned to create a full game.

Who Should Read This Book?

This book was written for developers. The reader should have a good understanding of programming in general. The book uses C#, but if the reader knows any modern language like C++, Java, or VB.NET he or she will have no problem understanding the code in this book. The book assumes some understanding of the Microsoft .NET Framework, as that is what the XNA Framework runs on. Without prior experience writing code using the .NET Framework, the reader might have to do a little research now and then, but should not have trouble reading this book.

This book was written with a few different audiences in mind. Business application developers who want to use their programming skill set to write computer games are one audience. Graphics and game developers who have been around the OpenGL and DirectX block should also find useful information in this book—especially in seeing how things are done "the XNA way." The book also targets readers who have some programming experience but have not done anything formal. The book teaches by example. It is written in such a way that if readers are not in front of their computers, they can still get valuable information from the book because the code is listed in the book as it is being discussed.

Hardware and Software Requirements

The code in this book is compiled against the XNA Framework 1.0 Refresh. In order to complete the games and demos in this book the requirements that follow must be met.

Supported Operating Systems

The following operating systems are supported:

- Windows XP Home Edition
- Windows XP Professional Edition
- Windows XP Media Center Edition
- Windows XP Tablet Edition
- Windows Vista Home Basic Edition
- Windows Vista Home Premium Edition
- Windows Vista Business Edition
- Windows Vista Enterprise Edition
- Windows Vista Ultimate Edition

Windows XP requires Service Pack 2 or later.

Hardware Requirements

When running XNA Framework games on Windows, a graphics card that supports Shader Model 1.1 is required. This book has samples that use Shader Model 2.0 and a couple that use Shader Model 3.0. To get the most from this book, a graphics card that supports Shader Model 3.0 is required. The graphics card should have the most up-to-date drivers. Updated drivers can be found on the graphics card's hardware vendor Web sites.

When running XNA Framework games on the Xbox 360 console, a hard drive must be connected to the console.

Software Requirements

All of the software required to utilize the XNA Framework on Windows is free:

Microsoft Visual C# 2005 Express Edition

Microsoft XNA Game Studio Express

DirectX 9.0c

Instructions on installing the software can be found in Chapter 1, "Introducing the XNA Framework and XNA Game Studio Express."

Code Examples

The source code for examples in this book can be found on the accompanying CD. Any updates to the code can be downloaded via www.samspublishing.com or www.xnaessentials.com/unleashed.