

LEARN C# in one day and LEARN IT WELL

The only book you need to
start coding in C# immediately

C# for Beginners with Hands-on Project
LEARN CODING FAST
JAMIE CHAN

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C# for Beginners with Hands-On Project
The only book you need to start coding in C#
immediately

By Jamie Chan

<http://www.learnCodingFast.com/csharp>

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Preface

This book is written to help you learn C# FAST and learn it WELL.

The book does not assume any prior background in coding. If you are an absolute beginner, you'll find that this book explains complex concepts in an easy to understand manner. If you are an experienced coder but new to C#, this book will provide you with enough depth to start coding in C# immediately.

All examples in the book are carefully chosen to demonstrate each concept so that you can gain a deeper understand of the language. Topics are carefully selected to give you a broad exposure to C#, while not overwhelming you with information overload. These topics include object-oriented programming concepts, error handling techniques, file handling techniques and more.

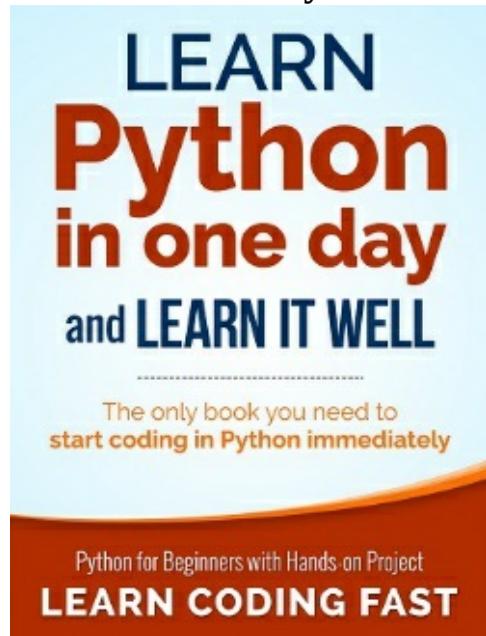
In addition, as Richard Branson puts it: "The best way of learning about anything is by doing". This book comes with a project where you'll be guided through the coding of a simple payroll software from scratch. The project uses concepts covered in the book and gives you a chance to see how it all ties together.

You can download the source code for the project and all the sample programs in this book at
<http://www.learnencodingfast.com/csharp>

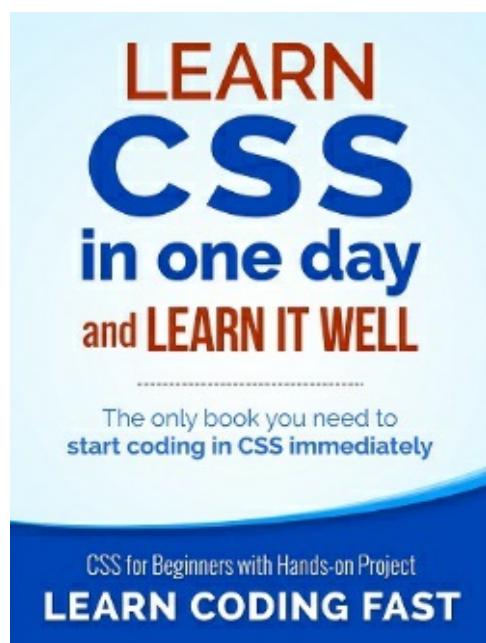
Contact Information

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Thank You

Appendix A – Project Answer

Chapter 1: Introduction to C#

Welcome to C# programming and thank you so much for picking up this book!

Whether you are a seasoned programmer or a complete novice, this book is written to help you learn C# programming fast. Topics are carefully selected to give you a broad exposure to C# while not overwhelming you with information overload.

By the end of the book, you should have no problem writing your own C# programs. In fact, we will be coding a simple payroll software together as part of the project at the end of the book. Ready to start?

First, let's answer a few questions:

What is C#?

C#, pronounced as C Sharp, is an object-oriented programming language developed by Microsoft in the early 2000s, led by Anders Hejlsberg. It is part of the .Net framework and is intended to be a simple general-purpose programming language that can be used to develop different types of applications, including console, windows, web and mobile applications. Like all modern programming languages, C# code resembles the English language which computers are unable to understand. Therefore, C# code has to be converted into machine language using what is known as a compiler (*refer to footnote*). The compiler that we'll be using in this book is the free Visual Studio Community 2015 provided by Microsoft.

Why Learn C#?

C# has syntax and features that resemble other programming languages like Java and C++. As such, if you have any prior programming experience, you will find learning C# a breeze. Even if you are totally new to programming, C# is designed to be easy to learn (unlike C or C++) and is a great first language to learn.

In addition, C# is part of the .Net framework. This framework includes a large library of pre-written code that programmers can use without having to write everything from scratch. This allows programmers to rapidly

develop their applications in C#, making C# the ideal language to work with if you are on a tight schedule.

Lastly, C# is an object-oriented programming (OOP) language. Object-oriented programming is an approach to programming that breaks a programming problem into objects that interact with each other. We'll be looking at various object-oriented programming concepts in this book. Once you master C#, you will be familiar with these concepts. This will make it easier for you to master other object-oriented programming languages in future.

Ready to dip your toes into the world of C# programming? Let's get started.

Footnote:

The conversion of a C# program into machine language is actually a bit more complicated than this. Visual Studio Community merely converts a C# program into MIL, which stands for Microsoft Intermediate Language. This MIL code is then converted into machine language by a virtual execution system known as the Common Language Runtime. For more information, you can check out <https://msdn.microsoft.com/en-us/library/z1zx9t92.aspx>. Nonetheless, for our purpose, we do not need to know these intricate details to develop our own C# programs.

Chapter 2: Getting ready for C#

Installing Visual Studio Community

Before we can start developing applications in C#, we need to download Visual Studio Community. As mentioned in Chapter 1, Visual Studio Community (VSC) is a free complier provided by Microsoft.

In fact, VSC is more than just a compiler. It is an Integrated Development Environment (IDE) that includes a text editor for us to write our code and a debugger to help us identify programming errors.

To download VSC, go to <https://www.visualstudio.com/en-us/products/visual-studio-community-vs.aspx>.



Click on the “Download Community 2015” button to download the file. Once you have downloaded the file, double click to install VSC. After you install, you’ll be prompted to restart your computer.

Once you restart your computer, you are ready to start coding your first C# program.

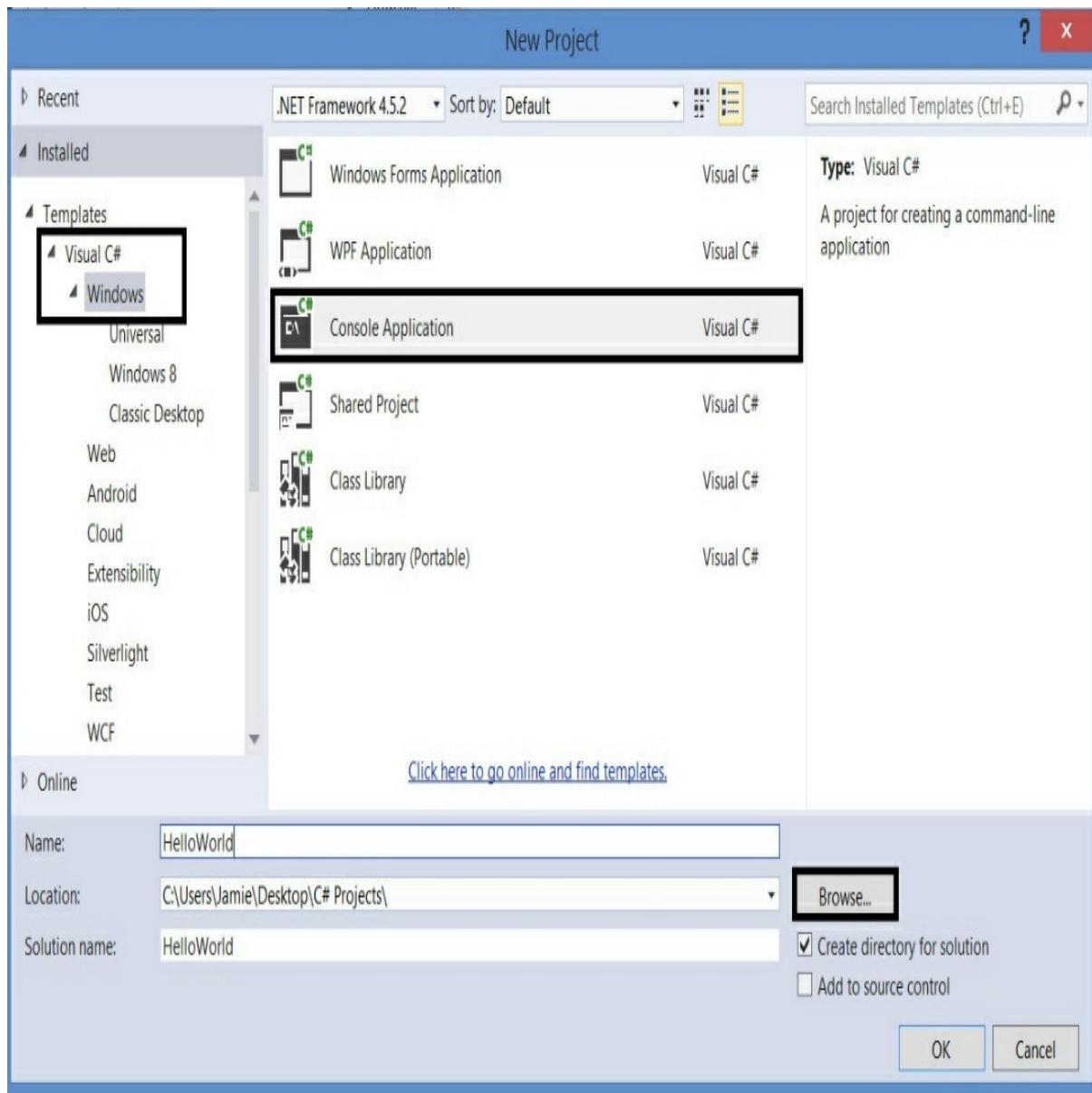
Your First C# Program

To write our first program, let's create a folder on our desktop and name it “C# Projects”. We will save all our C# projects to this folder.

Next, launch VSC and select File > New > Project.... (You may have to search for “Visual Studio 2015” if you cannot find VSC.) The first program that we are going to write is a console application. Console applications refer to programs that have no graphical user interface.

From the New Project dialog box, select “Visual C# > Windows” (on the left) and select “Console Application” in the main box.

Name this program “HelloWorld” and save it in the “C# Projects” folder created earlier. You can use the “Browse...” button to browse to the correct folder. Finally, click OK to create the project.



You will be presented with a default template that VSC created for you automatically.

Replace the code in the template with the code below. Note that line numbers are added for reference and are not part of the actual code. You may want to bookmark this page for easy reference later when we discuss the program. Due to the small screen sizes of most mobile devices, the code may look jumbled up if you are viewing it on a Kindle, tablet or mobile phone. If you have problems reading the code, you can try changing your screen to landscape mode. Alternatively, you can download the source code for this sample program and all other sample programs in this book at <http://www.learnencodingfast.com/csharp>.