Before You Begin

This section contains information you should review before using this book and instructions to ensure that your computer is set up properly for use with this book.

Font and Naming Conventions

We use fonts to distinguish between features, such as menu names, menu items, and other elements that appear in the program-development environment. Our convention is to emphasize IDE features in a sans-serif bold **Helvetica** font (for example, **Properties** window) and to emphasize program text in a sans-serif `Lucida` font (for example, `bool x = true`).

Software

We wrote the code examples in *C++ How to Program, 9/e* using the following C++ development tools:

- Microsoft's free Visual Studio Express 2012 for Windows Desktop, which includes Visual C++ and other Microsoft development tools. This runs on Windows 7 and 8 and is available for download at

```
www.microsoft.com/visualstudio/eng/downloads#
   d-express-windows-desktop
```

- GNU's free GNU C++ (`gcc.gnu.org/install/binaries.html`), which is already installed on most Linux systems and can also be installed on Mac OS X and Windows systems. To enable the new standard features in GNU C++, use the `g++` command's `-std=C++11` command-line option when you compile the corresponding programs.
- Apple's free Xcode, which OS X users can download from the Mac App Store.

Obtaining the Code Examples

The examples for *C for Programmers* are available for download at

```
www.deitel.com/books/cpphtp9
```

If you're not already registered at our website, go to `www.deitel.com` and click the **Register** link below our logo in the upper-left corner of the page. Fill in your information. There's no charge to register, and we do not share your information with anyone. We send you only account-management e-mails unless you register separately for our free e-mail newsletter at `www.deitel.com/newsletter/subscribe.html`. *You must enter a valid e-mail address*. After registering, you'll receive a confirmation e-mail with your verification code. Click the link in the confirmation email to go to `www.deitel.com` and sign in.

Next, go to `www.deitel.com/books/cpphtp9`. Click the **Download Code Examples** link to download the ZIP archive file to your computer. Write down the location where you save the file—most browsers will save the file into your `Downloads` folder.

Throughout the book, steps that require you to access our example code on your computer assume that you've extracted the examples from the ZIP file and placed them at `C:\examples` on Windows or your user directory on other platforms. You can extract them anywhere you like, but if you choose a different location, you'll need to update our steps accordingly.

Creating a Win32 Console Application Project in Visual Studio Express 2012 for Windows Desktop

On Windows, we created each example as a **Win32 Console Application** project by using the following steps:

1. In Visual Studio, select **File > New Project...**.
2. In the **New Project** dialog under **Templates > Visual C++ > Win32**, select **Win32 Console Application**, then name your project and click **OK**.
3. In the **Win32 Application Wizard**, click **Next >**.
4. Uncheck **Precompiled header** and **Security Development Lifecycle (SDL) checks**.
5. Check **Empty project** and click **Finish**.

You can add existing source code files to the project by dragging them from Windows Explorer to the **Source Files** folder in the Visual Studio **Solution Explorer**. You can add new source code files by right clicking the **Source Files** folder in the **Solution Explorer**, then selecting **Add > New Item...**. You can compile and execute your program by typing *Ctrl F5*.

Creating a Command Line Tool Project in Xcode

On OS X, we created each example as a **Command Line Tool** project by using the following steps:

1. In Xcode, select **File > New > Project...**.
2. In the sheet that appears, under **OS X**, select **Application**, then select **Command Line Tool** and click **Next**.
3. Name your project, specify `self.edu` for the **Company Identifier** and ensure that `C++` is selected for the **Type**, then click **Next**.
4. Specify where to save your project, then click **Create**.

In the **Project Navigator** at the left side of **Xcode**, you'll see file `main.cpp`. You can write new code in this file, or delete the file and drag existing code files from **Finder** into the project's folder in the **Project Navigator**. To add new files, you can select **File > New > File...**. You can click the **Run** button to compile and run your program.

Linux

On Linux, you can use your editor of choice to write your code. To compile the code, use the command

```
g++ -std=C++11 YourFileName.cpp
```

in the directory that contains your file. If the program has multiple `.cpp` files, list them separated by spaces. If the program compiles without error, this command creates the file `a.out` in the current directory. To run the program, type

```
./a.out
```