Hopefully, you are ready to begin your first week of learning advanced C. In this first week, you cover a lot of ground. Each day will present you with a different topic. Although it is suggested that you cover each topic in order, it is not necessary to do so during this first week.

On Day 1, you learn about allocating memory dynamically. Allocating memory dynamically is presented first because of its importance. Although you may not have used dynamic memory up to this point, as you develop larger programs, it will be quite useful.

On Day 2, you move into complex data types. Complex data types are extensions of the data types presented in most C books. In fact, you are probably already familiar with some of them. Complex data types include arrays of structures, function pointers, and variable length structures.

You move into one of the most confusing areas for C programmers on Day 3—linked lists. This is a topic that

many C programmers manage to avoid; however, there are times when linked lists can be the perfect solution to a problem.

On Day 4, you have the most fun in the first week (later days will be even more fun). It is on Day 4 that you are shown some of the basic ways of tapping into the system resources of your computer. A couple of the things you will be doing on Day 4 include displaying colorful text on your screen and placing the cursor anywhere you want it.

Day 5 moves into a topic that is important if you plan to move or port your C programs to different computers or different compilers. Portablity is one of the key features of the C language, and Day 5 will help you understand how to keep your code portable. In addition, you will obtain an overview of how to write efficient code.

On Day 6, you will be introduced to a topic that is often hidden in the back of most programming books. The computer works with numbers while people work with text. This chapter helps you bridge the gap so that you can understand how the computer's numbers and your text are related.

The final day of the week is extremely important. This is an introduction to libraries. You may not have known it, but every C program you have written has used at least one library! Every compiler comes with its own libraries. In addition to these provided libraries, you can also create your own. On Day 7, you will create and use your own library.

The second and third weeks will diverge from the first week. You will begin the second week by developing a multitude of library functions. As the second week progresses, you will learn about developing applications. Not only will you learn the coding aspects of application development, you will also learn issues surrounding design and planning. By the end of the second week, you will be well into developing and coding a full-fledged C application.

The third week is dedicated mostly to continuing the development of the application started in the second week. Reporting, incorporating help, testing, and more will all be presented. At the end of the third week, you will have a complete understanding of all aspects of application development.

This is where you're headed. For now you should take things one day at a time. A good place to start is Day 1.