Chapter VIII

Dynamic Wireless Application Development II: Developing ASP .NET Mobile Web Applications Using Visual Studio .NET

In this chapter, you will:

• Learn how to develop ASP .NET mobile Web applications using Visual Studio .NET
• Learn to create WML cards in Visual Studio .NET
• Learn to retrieve data from a database using the OleDbDataAdapter and Dataset objects
• Learn to read from a database using the OleDbDataCommand and OleDbDataReader objects
• Learn to insert records into a database using the OleDbDataCommand object
• Learn how to develop database-driven wireless applications

Introduction

In the previous chapter, we created an m-business application using ColdFusion. Besides ColdFusion, many other development tools can be used to develop m-business applications. Visual Studio .NET, an integrated development environment by Microsoft, has become an increasingly popular corporate application.
development tool due to its ease of use and support for a wide range of programming languages. Besides traditional Windows and Web applications, Visual Studio .NET also allows developers to build mobile and wireless applications with relative ease. The focus of this chapter is to discuss the tools and techniques for developing wireless applications using Visual Studio .NET. Wireless applications are developed using the ASP .NET Mobile Web Application template. The template provides developers with WYSIWYG tools for creating user interfaces for various mobile devices. These tools work seamlessly with ASP.NET, which uses a form-based approach to build server-side applications for processing user requests and interacting with databases. In this chapter, we will develop a business-to-consumer wireless application using Visual Studio .NET.

Parking Finder Application

Parking at the central business districts of most large cities in the U.S. has long been a costly problem for consumers. The existing process of finding parking is described in Figure 1. The process in Figure 1 is inefficient and ineffective due to the following reasons:

- Precious time and effort are wasted when the consumer drives around aimlessly looking for a parking lot.
- The consumer often parks in the first parking lot he or she finds without checking out competitors. This allows parking lots with location advantage to charge a premium due to the consumer’s lack of good information.
- Precious time and effort are wasted for consumers who choose to drive around and comparison shop for parking services.
- The consumer is forced to decide whether to park, on the spot, with enormous time pressure.

To solve this problem, we would like to create a prototype for a wireless application that helps consumers locate parking lots in the central business district of a cosmopolitan area. The wireless application can be accessed using WAP-enabled handsets by consumers. As previously discussed, the lack of parking lot information available to the consumer leads to the breakdown in the...
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