
Appendix A: Key Concepts Guide



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Concept	Module	Topic title
.NET data provider	7	What Is a .NET Data Provider?
.NET Framework		
Components	1	What Is the .NET Framework?
Function	1	How the .NET Framework Works
Interoperability	12	Interoperability
Security	12	.NET Framework Security
.NET Framework class library		
Definition	1	What Is the .NET Framework?
Namespaces	6	.NET Framework Class Library
.NET platform		
Components	1	What Is the .NET Platform?
.NET Remoting	12	.NET Remoting
A		
Access modifiers	3	How to Define Accessibility and Scope
	4	What Are Properties?
ADO.NET		
Definition	7	What Is ADO.NET?
Components	7	What Is ADO.NET?
Connected environment	7	What Is a Connected Environment?
Connection string	7	How to Specify the Database Connection
Database command	7	How to Specify the Database Command
Database security	7	How to Specify the Database Connection
Disconnected environment	7	What Is a Disconnected Environment?
Object model	7	What Is the ADO.NET Object Model?
Application		
Creating	1	The Development Process
Templates	1	What Is an Application Template?
Application settings	11	How to Save Application Settings to a Database
	11	How to Save Application Settings to the Windows Registry
	11	How to Work with User Preferences and Application Settings
Arrays	5	What Is an Array?
Access array members	5	How to Initialize and Access Array Members
Creating	5	How to Create an Array

Concept	Module	Topic title
Debugging tool	5	How to Initialize and Access Array Members
Definition	5	What Is an Array?
Index	5	How to Index an Object
Iterate through an array	5	How to Iterate Through an Array Using the foreach Statement
Jagged	5	What Is an Array?
Methods	5	What Is an Array?
Multidimensional	5	What Is an Array?
Using as method parameters	5	How to Use Arrays as Method Parameters
ArrayList	5	How to Use the ArrayList Class
Methods	5	How to Use the ArrayList Class
ASP.NET	10	What Is ASP.NET?
Application setting	10	How to Configure an ASP.NET Application Setting
Authentication	10	ASP.NET Security
Authorization	10	ASP.NET Security
Definition	10	What Is ASP.NET?
Impersonation	10	ASP.NET Security
State management	10	ASP.NET State Management
B		
Base	4	What Are Abstract Methods and Classes?
Scope	3	How to Define Accessibility and Scope
C		
C# Types		
Constants	2	How to Create and Use Constants
Converting between types	2	How to Convert Between Types
Enumerations	2	How to Create and Use Enumeration Types
Strings	2	How to Declare and Initialize Strings
Value types and reference types	3	How to Pass Parameters by Reference
	3	What Are Value Types and Reference Types?
Variables	2	How to Declare and Initialize Variables
	2	What Are Predefined Types?
Class		
Constructors	4	How to Call a Base Constructor from a Derived Class
	3	How to Initialize a Class
	3	How to Overload a Constructor
Derived	4	How to Create a Derived Class
	4	How to Use Base Class Members from a Derived Class
	4	How to Use a Sealed Class
	4	What Is Inheritance?
Collections	5	What Are Lists, Queues, Stacks, and Hash Tables?

Concept	Module	Topic title
Combo boxes	8	How to Use a Combo Box
Adding items	8	How to Use a Combo Box
Creating	8	How to Use a Combo Box
Event handler	8	How to Use a Combo Box
Comments		
Multi-line	2	How to Format Code in C#
Single-line	2	How to Format Code in C#
XML	3	How to Use XML Code Comment Features
Common dialog boxes	8	How to Create and Use a Common Dialog Box
Displaying	8	How to Create and Use a Common Dialog Box
FontDialog	8	How to Set Common Dialog Box Properties
OpenFileDialog	8	How to Set Common Dialog Box Properties
PrintDialog	8	How to Set Common Dialog Box Properties
Properties	8	How to Set Common Dialog Box Properties
Retrieving information	8	How to Read Information from a Common Dialog Box
SaveFileDialog	8	How to Set Common Dialog Box Properties
Common language runtime		
Definition	1	What Is the .NET Framework?
Function	1	How the .NET Framework Works
Custom dialog boxes	8	How to Create and Use a Custom Dialog Box
Adding	8	How to Create and Use a Custom Dialog Box
Dismissing	8	How to Create and Use a Custom Dialog Box
Event method	8	How to Create and Use a Custom Dialog Box
Modal	8	How to Create and Use a Custom Dialog Box
Modeless	8	How to Create and Use a Custom Dialog Box
Setting properties	8	How to Create and Use a Custom Dialog Box
Custom tabbed dialog boxes	8	How to Create and Use a Custom Tabbed Dialog Box
Adding	8	How to Create and Use a Custom Tabbed Dialog Box
Disabling	8	How to Create and Use a Custom Tabbed Dialog Box
Enabling	8	How to Create and Use a Custom Tabbed Dialog Box
Removing	8	How to Create and Use a Custom Tabbed Dialog Box
D		
DataAdapter	7	What Is a .NET Data Provider?
Definition	7	How to Create the DataAdapter Object
Methods	7	How to Create the DataAdapter Object
Object	7	How to Create the DataAdapter Object
Database record	7	How to Create a Database Record
Creating	7	How to Create a Database Record
Deleting	7	How to Delete a Database Record

Concept	Module	Topic title
Database record (<i>continued</i>)		
Updating	7	How to Update a Database Record
Handling errors	7	How to Update a Database Record
DataGrid	7	How to Bind a DataSet to a DataGrid
DataReader	7	What Is a .NET Data Provider?
DataSet class	7	What Is the ADO.NET Object Model?
Access data	7	How to Access Data in a DataSet Object
Binding	7	How to Bind a DataSet to a DataGrid
Populating	7	How to Create a DataSet Object
Data Wizards	7	How to Use the Data Wizards in Visual Studio .NET
Adding a DataGrid control	7	How to Use the Data Wizards in Visual Studio .NET
Data Form Wizard	7	How to Use the Data Wizards in Visual Studio .NET
DataAdapter Configuration Wizard	7	How to Use the Data Wizards in Visual Studio .NET
Server Explorer	7	How to Use the Data Wizards in Visual Studio .NET
Delegates	5	How to Create a Delegate
Calling	5	How to Create a Delegate
Creating	5	How to Create a Delegate
Definition	5	How to Create a Delegate
Multicasting	5	How to Create a Delegate
Syntax	5	How to Create a Delegate
Deploying applications	11	What Are the .NET Packaging and Deployment Options?
	11	How to Package and Deploy an Application Using Windows Installer
E		
Events	5	What Is an Event?
Definition	5	What Is an Event?
Event handlers	5	How to Write an Event Handler
Receiving events	5	How to Write an Event Handler
Sending (declaring)	5	How to Write an Event Handler
Types	5	What Is an Event?
Exception handling	5	
Catch	5	How to Use Exception Handling
Finally	5	How to Use Exception Handling
Syntax	5	How to Use Exception Handling
System overflow	5	How to Use Exception Handling
The catch sequence	5	How to Use Exception Handling
Throwing exceptions	5	How to Throw Exceptions
Try	5	How to Use Exception Handling

Concept	Module	Topic title
F		
File I/O		
Definition	6	What Is File I/O?
Enumerations	6	What Is File I/O?
Files		
Binary files	6	How to Read and Write Binary Files
Windows File System	6	How to Traverse the Windows File System
H		
Hash tables	5	What Are Lists, Queues, Stacks, and Hash Tables?
Using	5	How to Use Hash Tables
I		
Interfaces	5	What Is an Interface?
Declaring	5	How to Use an Interface
Definition	5	What Is an Interface?
Design considerations	5	What Is an Interface?
Implementing	5	How to Use an Interface
	5	How to Work with Objects That Implement Interfaces
Interface invariance	5	What Is an Interface?
Purpose	5	What Is an Interface?
L		
Lists	5	What Are Lists, Queues, Stacks, and Hash Tables?
M		
Main Menu	8	How to Create the Main Menu
Associating methods	8	How to Associate Methods with Menu Items
Method		
Abstract	4	What Are Abstract Methods and Classes?
Overloading	3	How to Overload a Method
Passing parameters	3	How to Pass Parameters to a Method
	3	How to Pass Parameters by Reference
	3	How to Pass a Reference Type
Virtual	4	How to Write Virtual Methods
Writing methods	3	How to Write a Method
MSIL (Microsoft Intermediate Language)		
Definition	1	How the .NET Framework Works
N		
Namespaces	3	How to Organize Classes Using Namespaces

Concept	Module	Topic title
O		
Object	3	What Are Classes and Objects?
Creating	3	How to Define a Class and Create an Object
Encapsulating functionality	4	What Is Encapsulation?
Initializing	3	How to Initialize an Object
Object Browser		
Elements	6	The Object Browser
Object marshaling	12	Interoperability
Operators		
Operator types	2	What Are Expressions and Operators?
Precedence	2	How to Determine Operator Precedence
P		
Polymorphism	4	What Is Polymorphism?
Preprocessing		
C# Preprocessor	12	The C# Preprocessor
Properties	4	What Are Properties?
Q		
Queue	5	What Are Lists, Queues, Stacks, and Hash Tables?
Using	5	How to Use Queues and Stacks
R		
Recursion		
Function	6	How to Read and Write Binary Files
Reflection		
Attributes and reflection	12	Attributes and Reflection
S		
Stacks	5	What Are Lists, Queues, Stacks, and Hash Tables?
Using	5	How to Use Queues and Stacks
Statements		
Conditional	2	How and When to Use the If Statement
	2	How and When to Use the Switch Statement
Iteration	2	How to Use a Do Loop
	2	How to Use a For Loop
	2	How to Use a While Loop
Status Bar	8	How to Create a Status Bar
Adding	8	How to Create a Status Bar
Adding panels	8	How to Add Panels to a Status Bar
Panel properties	8	How to Create a Status Bar

Concept	Module	Topic title
Streams		
Definition	6	What Is File I/O?
FileStream class	6	What Is File I/O?
Operations	6	What Is File I/O?
Stream class	6	How to Read and Write Text Files
StreamReader class	6	How to Read and Write Text Files
StreamWriter class	6	How to Read and Write Text Files
Strings		
Custom numeric format strings	6	How to Format Numbers
DateTime format strings	6	How to Format Date and Time
Dynamic strings	6	How to Create Dynamic Strings
Numeric format strings	6	How to Format Numbers
Structs		
Definition	12	Structs
Syntax	2	What Is the Structure of a C# Program?
System.Object		
Definition	6	.NET Framework Class Library
Inheritance	6	Methods Inherited from System.Object
T		
Threads		
Definition	12	C# Threads and Threading
Toolbars	8	How to Create a Toolbar
Adding buttons	8	How to Use Toolbar Properties
Adding icons	8	How to Use Toolbar Properties
ButtonClick event	8	How to Write Code for the ButtonClick Event
Docking	8	How to Use Toolbar Properties
Docking options	8	How to Use Toolbar Properties
Properties	8	How to Create and Use a Custom Tabbed Dialog Box
	8	How to Use Toolbar Properties
Toolbox		
Icons	1	How to Use the Windows Forms Designer
ToString method	6	How to Override and Implement ToString
U		
Updating databases	7	How to Update a Database in ADO.NET
User preferences	11	How to Work with User Preferences and Application Settings
V		
Visual Studio .NET		
Projects	1	Structure of Visual Studio Solutions and Projects
Solutions	1	Structure of Visual Studio Solutions and Projects

Concept	Module	Topic title
W		
Web Forms	10	What Is a Web Forms Application?
Accessing data	10	How to Access Data by Using a Web Forms Application
Adding controls	10	How to Add Controls to a Web Forms Application
Components	10	What Are the Components of a Web Forms Application?
Creating	10	How to Create a Web Forms Application
Definition	10	What Is a Web Forms Application?
Displaying data	10	How to Display Data on a Web Forms Application
Event handler	10	How to Add an Event Handler for the Control
Features	10	What Is a Web Forms Application?
Life cycle	10	What Is the Life Cycle of a Web Forms Application?
State management	10	What Is a Web Forms Application?
Windows Forms Designer		
Function	1	How to Use the Windows Forms Designer
X		
XML		
XMLTextReader class	6	How to Read and Write Text Files
XMLTextWriter class	6	How to Read and Write Text Files
XML Web services		
Building	9	How to Create an XML Web Service by Using Visual Studio .NET
Calling in code	9	How to Call an XML Web Service Method in Code
Definition	9	What Is an XML Web Service?
Locating	9	How to Locate the URL of an XML Web Service
Referencing	9	How to Add a Web Reference to an XML Web Service
Testing	9	How to Test an XML Web Service by Using Visual Studio .NET
vs. .NET remoting	12	.NET Remoting