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Using SQL Management Objects

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收听本次课程需具备的条件

- VS 2005
- C#

Level 300

Agenda

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- Introduction to SQL Management Objects
- Using SQL Management Objects

Introduction SQL Management Object

- What Are SQL Management Objects?
- The SQL Management Object Model
- How to Reference SQL Management Objects
- How to Retrieve Server Properties
- How to Create Objects by Using SMO
- How to Modify Existing Objects by Using SMO

What Are SQL Management Objects

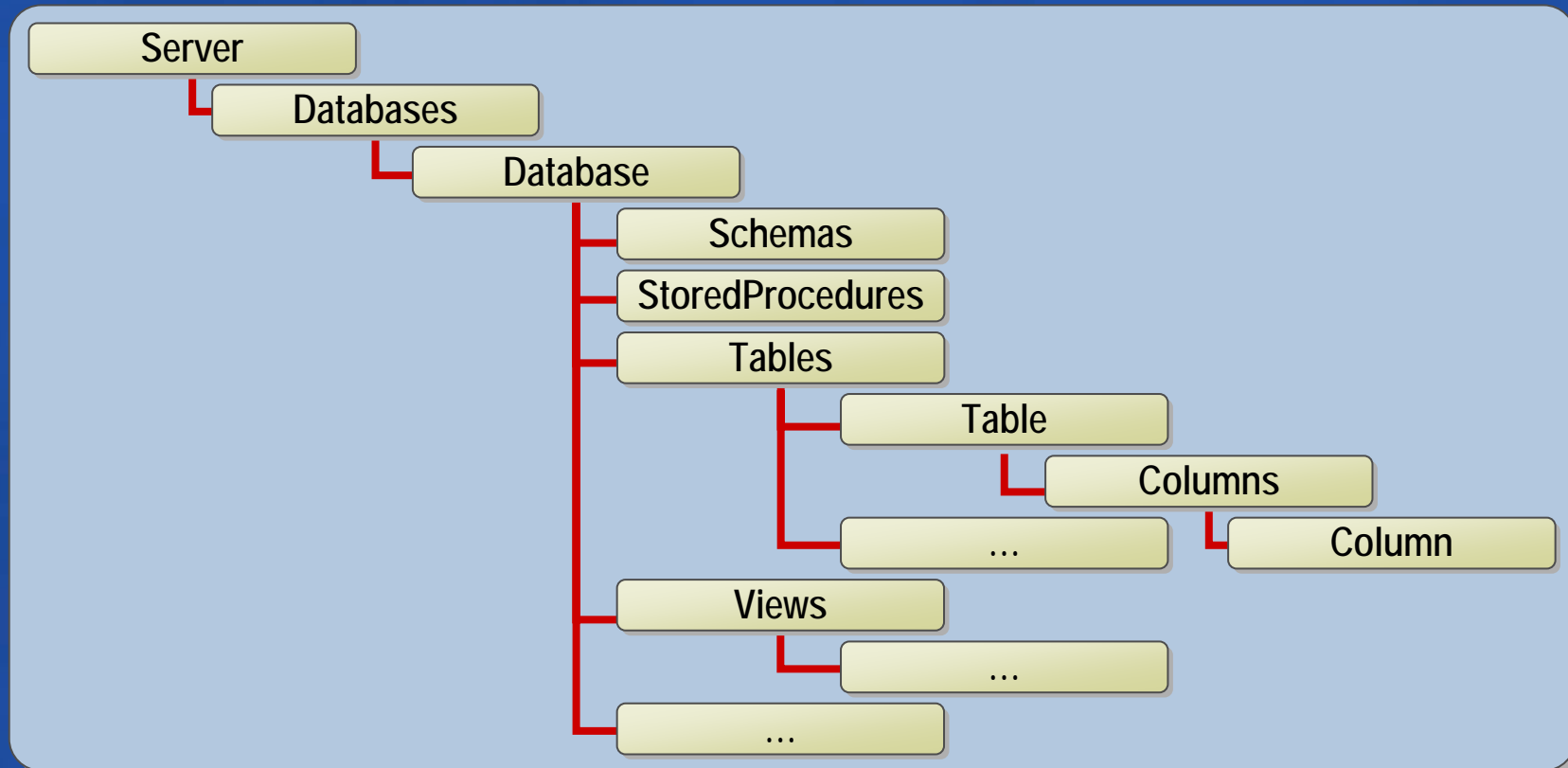
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- Provide programmatic management of SQL Server 7, 2000, and 2005
- Implemented as classes within .NET assemblies
- Replacement for Distributed Management Objects (DMO)
- Features include:
 - Optimized instantiation
 - Capture execution
 - WMI functionality
 - Scripting
 - Server option configuration

The SQL Management Object Model

- Hierarchical instance classes representing server

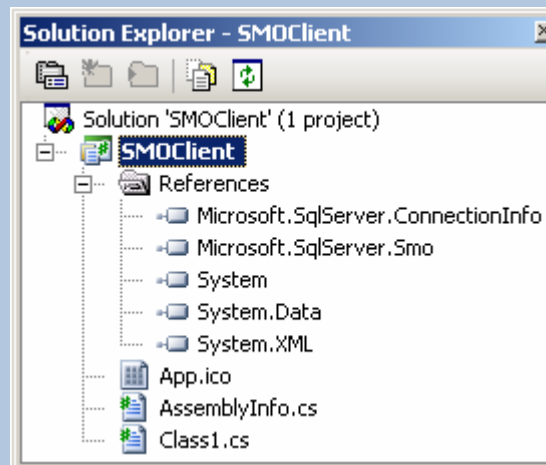


- Utility classes
 - Backup, Restore, Scripter, Transfer

How to Reference SQL Management Objects

1 Create .NET client application

2 Reference SQL SMO assemblies



3 Use *Imports* or *using* statements within code

```
using Microsoft.SqlServer.Management.Smo
```

```
using Microsoft.SqlServer.Management.Common
```

How to Retrieve Server Properties

1 Instantiate *Server* object

2 Work with properties or *Databases* collection

```
Server svr= New Server("DBSERVER") ;  
Console.WriteLine(svr.Information.VersionString);  
Console.WriteLine(svr.Settings.MasterDBPath);  
Console.WriteLine(svr.Configuration.NestedTriggers.RunValue.ToS  
tring());  
  
Foreach(Database db In svr.Databases)  
{  
    Console.WriteLine(db.Name & ": " & db.Size & "K");  
}
```



How to Create Objects by Using SMO

- 1 Create and instantiate object variables
- 2 Set appropriate properties
- 3 Add children to parents and call *Create* method to update server

```
Database AWDBase = Svr.Databases("AdventureWorks");  
Table DiscountsTable = New Table(AWDBase, "Discounts")  
Column DiscountID = New Column(DiscountsTable, "DiscountID",  
    DataType.Int);  
Column DiscountName = New  
Column(DiscountsTable, "DiscountName", DataType.NVarChar(40));  
DiscountID.Identity = True;  
DiscountsTable.Columns.Add(DiscountID);  
DiscountsTable.Columns.Add(DiscountName);  
DiscountsTable.Create();
```



How to Modify Existing Objects by Using SMO

- 1 Locate appropriate object
- 2 Change properties or call methods
- 3 Call *Alter* method to send property changes to server

```
Database AWDBase = Svr.Databases("AdventureWorks");  
Table DiscountsTable = AWDBase.Tables("Discounts");  
Column  
DiscountName=DiscountsTable.Columns("DiscountName");  
DiscountName.Nullable = False;  
// or call method such as  
// DiscountName.Drop();  
DiscountName.Alter(); // only needed for property changes
```



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Using SQL Management Objects

- SQL Management and Monitor Application
- Functions
 - Script
 - Backup & Restore
- Database Setup Application

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Summary


- New useful tool to manage
- New Object Model

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- **MSDN Flash**
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Question & Answer

如需提出问题，请单击“提问”按钮并在随后显示的浮动面板中输入问题内容。一旦完成问题输入后，请单击“提问”按钮。

 **问题和解答 (无问题)** ▲ ×

在此会议中尚未解答任何问题。

要向演示者提问，请在此处键入问 

提问(A)

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问题管理器(Q)

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