



ADO.NET????DBMS????, ?????Data Provider. ??????????????????, ?????????, ??????????, ???Data Provider??
????????, ??????????????.

.NET 2.0?, ?????(factory)??, ???NET Data Provider?????DbProviderFactory?base-class. DbProviderFactory?
????????????, ???????????????????. ??:

1. CreateCommand
2. CreateCommandBuilder
3. CreateConnection
4. CreateDataAdapter
5. CreateParameter

???????????????????? ???????:

```
DbProviderFactory dbProviderFactory;
```

```
dbProviderFactory=DbProviderFactories.GetFactory("System.Data.SqlClient");
```

????????????????, ???GetFactory??????. ??????????????????(hard-coded)?????, ??????????????????. ??????????????
?.

????????????????????, ??????:

1. ??????????????
2. ??????????????

????????????????????Simple Factory?. ?????????????????machine.config?????.

```

128     <system.data>
129         <DbProviderFactories>
130             <add name="Odbc Data Provider" invariant="System.Data.Odbc" d
131             <add name="OleDb Data Provider" invariant="System.Data.OleDb"
132             <add name="OracleClient Data Provider" invariant="System.Data
133             <add name="SqlClient Data Provider" invariant="System.Data.Sq
134             <add name="Microsoft SQL Server Compact Data Provider" invari
135     </system.data>

```

????????????????Data Provider.

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data;
using System.Data.Common;

```

```

namespace WA_ADONET
{
    public partial class listdataprovider : System.Web.UI.Page
    {
        protected void Page_Load(object sender, EventArgs e)
        {
            DataTable dtDataProviders = DbProviderFactories.GetFactoryClasses();
            //GvDataProviders is a GridView component
            GvDataProviders.DataSource = dtDataProviders;

```

```
GvDataProviders.DataBind();
}
}
}
??????:
```

The screenshot shows a web browser window with the address bar at `http://localhost:57918/listda`. The browser displays a table with the following columns: Name, Description, InvariantName, and AssemblyQualifiedName. The table lists five data providers: Odbc Data Provider, OleDb Data Provider, OracleClient Data Provider, SqlClient Data Provider, and Microsoft SQL Server Compact Data Provider.

Name	Description	InvariantName	AssemblyQualifiedName
Odbc Data Provider	.Net Framework Data Provider for Odbc	System.Data.Odbc	System.Data.Odbc.OdbcFactory, System.Data, Version=2.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089
OleDb Data Provider	.Net Framework Data Provider for OleDb	System.Data.OleDb	System.Data.OleDb.OleDbFactory, System.Data, Version=2.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089
OracleClient Data Provider	.Net Framework Data Provider for Oracle	System.Data.OracleClient	System.Data.OracleClient.OracleClientFactory, System.Data.OracleClient, Version=2.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089
SqlClient Data Provider	.Net Framework Data Provider for SqlServer	System.Data.SqlClient	System.Data.SqlClient.SqlClientFactory, System.Data, Version=2.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089
Microsoft SQL Server Compact Data Provider	.NET Framework Data Provider for Microsoft SQL Server Compact	System.Data.SqlServerCe.3.5	System.Data.SqlServerCe.SqlCeProviderFactory, System.Data.SqlServerCe, Version=3.5.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91

```
????????????Data Provider???:
using System;
using System.Configuration;
using System.Collections.Generic;
using System.Linq;
using System.Web;
```

```

using System.Web.UI;
using System.Web.UI.WebControls;
using System.Data;
using System.Data.Common;
using System.Data.SqlClient;

namespace WA_ADONET
{
    public partial class usingsqldataprovider : System.Web.UI.Page
    {
        private const string DATA_PROVIDER_NAME = "System.Data.SqlClient";
        private const int CONNECTION_STRING_INDEX = 1;

        protected void Page_Load(object sender, EventArgs e)
        {
            string connString =
ConfigurationManager.ConnectionStrings[CONNECTION_STRING_INDEX].ConnectionString;

            DbProviderFactory dbProvider = DbProviderFactories.GetFactory(DATA_PROVIDER_NAME);
            DbConnection dbConnection = dbProvider.CreateConnection();
            DbCommand dbCommand = dbProvider.CreateCommand();
            DbDataAdapter dbDataAdapter = dbProvider.CreateDataAdapter();
            DataSet dataSet = new DataSet();

            dbConnection.ConnectionString = connString;

            dbCommand.Connection = dbConnection;
            dbCommand.CommandText = "SELECT TOP 10 * FROM Mail ORDER BY CDATE DESC";

            dbDataAdapter.SelectCommand = dbCommand;
            dbDataAdapter.Fill(dataSet);
            //GvMails is a GridView component
            GvMails.DataSource = dataSet.Tables[0];
            GvMails.DataBind();
        }
    }
}
DataAdapter?????????, ???????Connection?????????Open?Close???. ???DataAdapter???????. ???Fill????????????
?DataSet??, DataSet????????????????????????????????????????, ???, ??????????, ??????????????????????. ??????????:

```

CDate	Caption	Content	Author	EMail	Tel	RDate	RContent	RAuthor	FDate
2011/9/26 下午 05:22:00	噪音汙染聲響干擾影響起居生活	test..... 我在竹 北市三 民路 附 近，發 現 噪音 汙染聲 響干擾 影響起 居生 活，	JERRY	@.COM	111				
2011/9/23 下午 02:14:00	TEST1	TEST1...	jerry	jerry@gmail.com	0922000111				
2011/9/23 下午 02:13:00	TEST	TEST...	jerry	jerry@gmail.com	0922000111				
2011/9/23 下午 02:10:00	Test	Test	Test	Test	Test				
2011/9/23 下午 02:09:00	Test	Test	Test	Test	Test				
2011/9/23 下午	Test	Test	Test	Test	Test				