

# ASP.NET & ADO.NET Examples

Getting Started with ASP.NET and Database Communication using ADO.NET

Hans-Petter Halvorsen

# Web Form and ADO.NET Examples

In this Tutorial we will create the following Examples:

## Web Form Example 1

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Can Example	$\leftarrow \  \  \rightarrow$	$\bigcirc$ localhost:28771/WebForm2.aspx $\square \bigstar$ = $\square \oslash$ $\cdots$	
Car Example	🤼 Hans-Petter	G Google >> Fronter 🔤 Digi 🗊 ITavisen 🕅 MacWorld Sverige 🗸 🗸	/
Registration Number: AR123456 Car Type: Toyota	Car Ex Car Type List:	ample	
Save Data	Ford Toyota Volvo		

# Web Form and ADO.NET Examples

In this Tutorial we will create the following Examples:

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## Web Form Example 3

# **Car Example**

Car Number List:

AR123456

Get CarType

The Car Type is: Toyota

## Web Form Example 4

Car Example		
Registration Number:		
Save Data		



# **SQL Server Database**

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# Create Database and Table used in Examples

XPS	315HPH\SQLEXPRESS.TEST - d	lbo.CAR ⊹ ×	XPS15H	IPH\SQLEXPRES	S.TEST - dbo.CAR
	Column Name	Data Type	2	Allow Nulls	
Þ	RegistrationNumber	varchar(50)		$\checkmark$	
	CarType	varchar(50)		$\checkmark$	

XPS15	HPH\SQLEXPRESS.1	TEST - dbo.CAR	XPS15HPH\SC
	RegistrationN	CarType	
	FF123456	Volvo	
	NF567890	Ford	
)-W	NULL	NULL	

Web Form Example 1



# Writing Data to Database

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# Web Form Example 1

We will create the following Web Form Example:



### **Car Example**

Registration Number:

AR123456

Car Type:

Toyota

Save Data

# **Create ASP.NET Project**



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WebForm1.aspx 🕂 🗙 W	ebForm1.aspx.cs			
4 5 ⇒ <html xmln<br="">6 ⇒ <head runa<br="">7</head></html>	<pre>s="http://www.w3.org/1/ t="server"&gt; &gt;Car Registration Form id="form1" runat="server 1&gt;Car Example gistration Number: sp:TextBox ID="txtRegi r /&gt; sp:TextBox ID="txtCarT] r /&gt; sp:TextBox ID="txtCarT] r /&gt; sp:Button ID="btnSave" &gt;</br></pre>	<pre>999/xhtml"&gt;  er"&gt; /&gt; strationNumber" r ype" runat="serve runat="server" 0</pre>	Finetune GUI element the Code window unat="server" Width="200px">r" Width="200px">	:s ir ∞
29 30				
Car Exam Registration Number: Car Type:	1ple	Drag Text from the Propertie	boxes and a Button Toolbox and update	
Save Data	Double-click t	to create l	Event Handler	

## ASPX Code (WebForm1.aspx)

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm1.aspx.cs"
Inherits="Database Web Example.WebForm1" %>
```

```
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Car Registration Form</title>
</head>
<body>
    <form id="form1" runat="server">
    <div>
        <h1>Car Example</h1>
        Registration Number:<br />
        <asp:TextBox ID="txtRegistrationNumber" runat="server" Width="200px"></asp:TextBox>
        <br />
        Car Type:<br />
        <asp:TextBox ID="txtCarType" runat="server" Width="200px"></asp:TextBox>
        <br />
        <br />
        <asp:Button ID="btnSave" runat="server" OnClick="btnSave Click" Text="Save Data" />
    </div>
   </form>
</body>
</html>
```

WebForm1.as	spx	WebForm1.aspx.cs* 👳 🗙		
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1	⊡usi	ng System;		
2	usi	ng System.Data.SqlClient;		
3				
4	🖃 nam	espace Database_Web_Example		
5	{			
		2 references		
6	-	public partial class WebForm1 :	System.Web.UI.Page	
7		{		
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10		1		
11		1		
12	-	1		
12		0 references   0 exceptions		
13		protected void btnSave Clic	k(object sender, EventArgs e)	
14		{		
15				
16		<pre>string sqlQuery = "INSE</pre>	RT INTO CAR VALUES (" + "'" + txtRegistrationNum	ber.Text + "'" + "," + "'" + txtCarType.Text + "'" + ")";
17				
18		SqlConnection $conDB = n$	ew SqlConnection("Data Source= Your Database	;Initial Catalog=TEST;Integrated Security=True");
19				
20		conDB.Open();		
21				
22		SqlCommand sc = new Sql	Command(sqlQuery, conDB);	
23				
24		<pre>sc.ExecuteNonQuery();</pre>		
25				
26		conDB.Close();		
27				
28	-	}		
29	-	}		
30	[}			

```
using System;
using System.Data.SqlClient;
namespace Database Web Example
   public partial class WebForm1 : System.Web.UI.Page
       protected void Page Load(object sender, EventArgs e)
        }
       protected void btnSave Click(object sender, EventArgs e)
            string sqlQuery = "INSERT INTO CAR VALUES (" + "'" + txtRegistrationNumber.Text + "'" + "," + "'" + txtCarType.Text + "'" + ")";
            SqlConnection conDB = new SqlConnection("Data Source=<Your Database >;Initial Catalog=TEST;Integrated Security=True");
            conDB.Open();
            SqlCommand sc = new SqlCommand(sqlQuery, conDB);
            sc.ExecuteNonQuery();
            conDB.Close();
```

# Visual Studio Project

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# **Running Web Form**



### **Car Example**

Registration Number:

Car Type:



# **Entering and Saving Data**





You are finished with the Example

Web Form Example 2



# Getting Data from Database

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# Web Form Example 2

We will create the following Web Form Example:

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$\leftarrow \rightarrow$	🕐 🛛 localhost:28771/WebForm2.aspx	I	٩	
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<b>Car Ex</b> Car Type List Ford Toyota Volvo	t			

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1 -	<pre>K*@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm2.aspx.cs" Inherits="Database_Web_Example.WebForm2" </pre>
2	
3 4	<pre><!DOCTYPE html>    </pre>
4	
5 🕂	<pre><html xmlns="http://www.w3.org/1999/xhtml"></html></pre>
6 🖻 🕯	<pre><head runat="server"></head></pre>
7	<title></title>
8 4	
9 🗗	  body>
10 🖃	<form id="form1" runat="server"></form>
11	<div></div>
12	
13	<h1>Car Example</h1>
14	
15	Car Type List: Or />
16	<pre><asp:uropdownlist height="16px" id="listCarlypes" runat="server" width="200px"></asp:uropdownlist></pre>
1/	
18	
19	
20	
21	
22	<pre></pre>
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Car	Example
	<b>▲</b>

Car Type List: Unbound

▼

## ASPX Code (WebForm2.aspx)

```
<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm2.aspx.cs"</pre>
Inherits="Database Web Example.WebForm2" %>
<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Car List</title>
</head>
<body>
    <form id="form1" runat="server">
    <div>
        <h1>Car Example</h1>
        Car Type List:<br />
        <asp:DropDownList ID="listCarTypes" runat="server" Height="16px" Width="200px">
        </asp:DropDownList>
        <br />
    </div>
    </form>
</bodv>
</html>
```

```
WebForm2.aspx
                   WebForm2.aspx.cs + ×
                                                    - A Database Web Example.WebForm2
Database Web Example

    Page_Load(object sender, EventArgs e)

      1
            using System;
      2
             using System.Data.SqlClient;
      з
            using System.Web.UI.WebControls;
      4
      5
           namespace Database Web Example
      6
                 2 references
      7
                 public partial class WebForm2 : System.Web.UI.Page
      8
                     Oreferences | O exceptions
      9
                     protected void Page Load(object sender, EventArgs e)
     10
     11
                                                                                                     ;Initial Catalog=TEST;Integrated Security=True");
     12
                         SqlConnection conDB = new SqlConnection("Data Source= Your Database
     13
     14
                         conDB.Open();
     15
     16
                         string sqlQuery = "SELECT CarType FROM CAR ORDER BY CarType";
     17
     18
                         SqlCommand sc = new SqlCommand(sqlQuery, conDB);
     19
     20
                         SqlDataReader reader;
     21
     22
                         reader = sc.ExecuteReader();
     23
     24
     25
                         while (reader.Read())
     26
                             ListItem newItem = new ListItem();
     27
     28
     29
                             newItem.Text = reader["CarType"].ToString();
     30
                             listCarTypes.Items.Add(newItem);
     31
     32
     33
     34
     35
                         conDB.Close();
     36
     37
     38
     39
```

```
using System;
using System.Data.SqlClient;
using System.Web.UI.WebControls;
namespace Database_Web_Example
   public partial class WebForm2 : System.Web.UI.Page
        protected void Page_Load(object sender, EventArgs e)
            SqlConnection conDB = new SqlConnection("Data Source=<Your Database>;Initial Catalog=TEST;Integrated Security=True");
            conDB.Open();
            string sqlQuery = "SELECT CarType FROM CAR ORDER BY CarType";
            SqlCommand sc = new SqlCommand(sqlQuery, conDB);
            SqlDataReader reader;
            reader = sc.ExecuteReader();
            while (reader.Read())
                ListItem newItem = new ListItem();
                newItem.Text = reader["CarType"].ToString();
                listCarTypes.Items.Add(newItem);
            conDB.Close();
        }
```

# Visual Studio Project

Database Web Example - Microsof	t Visual Studio 🗸 🗗 🖸	Juick Launch (Ctrl+Q)
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# **Running Web Form**





You are finished with the Example

Web Form Example 3



# Getting spesific Data from Database based on User Interaction

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# Web Form Example 3

We will create the following Web Form Example:

# **Car Example**

Car Number List:

AR123456

 $\sim$ 

Get CarType

The Car Type is: Toyota

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### ASPX Code (WebForm3 aspx)

<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm3.aspx.cs"
Inherits="Database\_Web\_Example.WebForm3" %>

```
<!DOCTYPE html>
```

```
<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title>Select Car Registration Number</title>
</head>
<body>
    <form id="form1" runat="server">
    <div>
        <h1>Car Example</h1>
        Car Number List:<br />
        <asp:DropDownList ID="listCarNumbers" runat="server" Height="16px" Width="200px">
        </asp:DropDownList>
        <br />
        <br />
        <asp:Button ID="btnGetCarType" runat="server" OnClick="btnGetCarType_Click" Text="Get CarType" />
        <br />
        The Car Type is: <asp:Label ID="lblCarNumber" runat="server" Text="Label"></asp:Label>
        <br />
    </div>
    </form>
</body>
</html>
```

VebForm3.asj	эх	WebForm3.aspx.cs + ×
🗊 Database V	Veb Examp	ole 🗸 📌 🔩 Database_Web_Example.WebForm3
1	⊡using	System;
2	using	System.Data.SqlClient;
3	using	System.Web.UI.WebControls;
4		
5	⊟namesp	ace Database_Web_Example
6	{	
7		blic partial class WebForm3 · System Web UI.Page
8	f	
Ū	( (	0 references   0 exceptions
9	Ė.	<pre>protected void Page_Load(object sender, EventArgs e)</pre>
10		{
11		<pre>if (!IsPostBack)</pre>
12		{
13		FillCarNumberList();
14		}
15		}
16		
47		0 references   0 exceptions
17		protected vold bthGetCarlype_Click(object sender, EventArgs e)
18		
19		GetCarlype();
20	-	}
21		
~~~~		1 reference 0 exceptions
23	+	void FillCarNumberList()
52		
		1 reference   0 exceptions
53	÷	void GetCarType()
75		
76	}	
77	[ }	

```
using System;
using System.Data.SqlClient;
using System.Web.UI.WebControls;
namespace Database Web Example
{
    public partial class WebForm3 : System.Web.UI.Page
        protected void Page Load(object sender, EventArgs e)
            if (!IsPostBack)
                FillCarNumberList();
            }
        }
        protected void btnGetCarType_Click(object sender, EventArgs e)
            GetCarType();
}
```

void FillCarNumberList()

SqlConnection conDB = new SqlConnection("Data Source=<Your Database>;;Initial Catalog=TEST;Integrated Security=True");

conDB.Open();

string sqlQuery = "SELECT RegistrationNumber FROM CAR ORDER BY RegistrationNumber";

SqlCommand sc = new SqlCommand(sqlQuery, conDB);

SqlDataReader reader;

```
reader = sc.ExecuteReader();
```

```
while (reader.Read())
```

```
ListItem newItem = new ListItem();
```

```
newItem.Text = reader["RegistrationNumber"].ToString();
listCarNumbers.Items.Add(newItem);
}
conDB.Close()
```

void GetCarType()

SqlConnection conDB = new SqlConnection("Data Source=<Your Database>;Initial Catalog=TEST;Integrated Security=True");

```
conDB.Open();
```

string sqlQuery = "SELECT CarType FROM CAR WHERE RegistrationNumber='" + listCarNumbers.SelectedItem.Text + "'";

```
SqlCommand sc = new SqlCommand(sqlQuery, conDB);
```

```
SqlDataReader reader;
```

```
reader = sc.ExecuteReader();
if (reader.Read())
{
    lblCarNumber.Text = reader["CarType"].ToString();
}
conDB.Close();
```

# **Visual Studio Project**

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# **Running Web Form**

# **Car Example**

#### Car Number List:

AR123456 ~

Get CarType

The Car Type is: Toyota

x	SQLQuery3.sql - X15HPH\hansha (54))* 😐 🗙					
	select * from CAR					
	100 %	-				
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You are finished with the Example



# Layout

Hans-Petter Halvorsen

#### Web Form Example 4



# Bootstrap

Hans-Petter Halvorsen

# Bootstrap

- Bootstrap is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first web sites.
- Bootstrap is completely free to download and use!
- Bootstrap is a free front-end framework for faster and easier web development
- Bootstrap includes HTML and CSS based design templates for typography, forms, buttons, tables, navigation, modals, etc.
- Bootstrap also gives you the ability to easily create responsive designs

#### http://getbootstrap.com

http://www.w3schools.com/bootstrap/

# Create Layout with Bootstrap

$\leftarrow$ $\rightarrow$ $\circlearrowright$ localhost:28771/WebFc $Ш$ 🕁	
🛃 Hans-Petter G Google >> Fronter 🌆 Digi 🗊 ITavisen	Car Example
Car Example	Registration Number:
Registration Number: AR123456	Car Type:
Car Type: Toyota	Save Data
Save Data	Save Data

<%@ Page Language="C#" AutoEventWireup="true" CodeBehind="WebForm4.aspx.cs" Inherits="Database\_Web\_Example.WebForm4" %>

<!DOCTYPE html>

</head>

#### <body>

<form id="form1" runat="server">

<div class="container-fluid">

<div class="panel panel-success">

<div class="panel-heading">

<h1>Car Example</h1>

</div>

<div class="panel-body">

<label for="txtRegistrationNumber">Registration Number:</label> <asp:TextBox ID="txtRegistrationNumber" runat="server" Width="200px" class="form-control"></asp:TextBox></asp

```
<label for="txtCarType">Car Type:</label>
<asp:TextBox ID="txtCarType" runat="server" Width="200px" class="form-control"></asp:TextBox>
```

<br />

<asp:Button ID="btnSave" runat="server" OnClick="btnSave\_Click" Text="Save Data" class="btn btn-success" />

</div>

</div>

</div> </form> </body> </html>

# **Final Results**

#### Car Example

**Registration Number:** 

Car Type:

Save Data



You are finished with the Example

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