Practical 10

Aim:- Design a webpage to demonstrate the working of a simple stored procedure.

SQL Server stored procedure is a batch of statements grouped as a logical unit and stored in the database. The stored procedure accepts the parameters and executes the T-SQL statements in the procedure, returns the result set if any.

Benefits of using a stored procedure

It can be easily modified:

Reduced network traffic

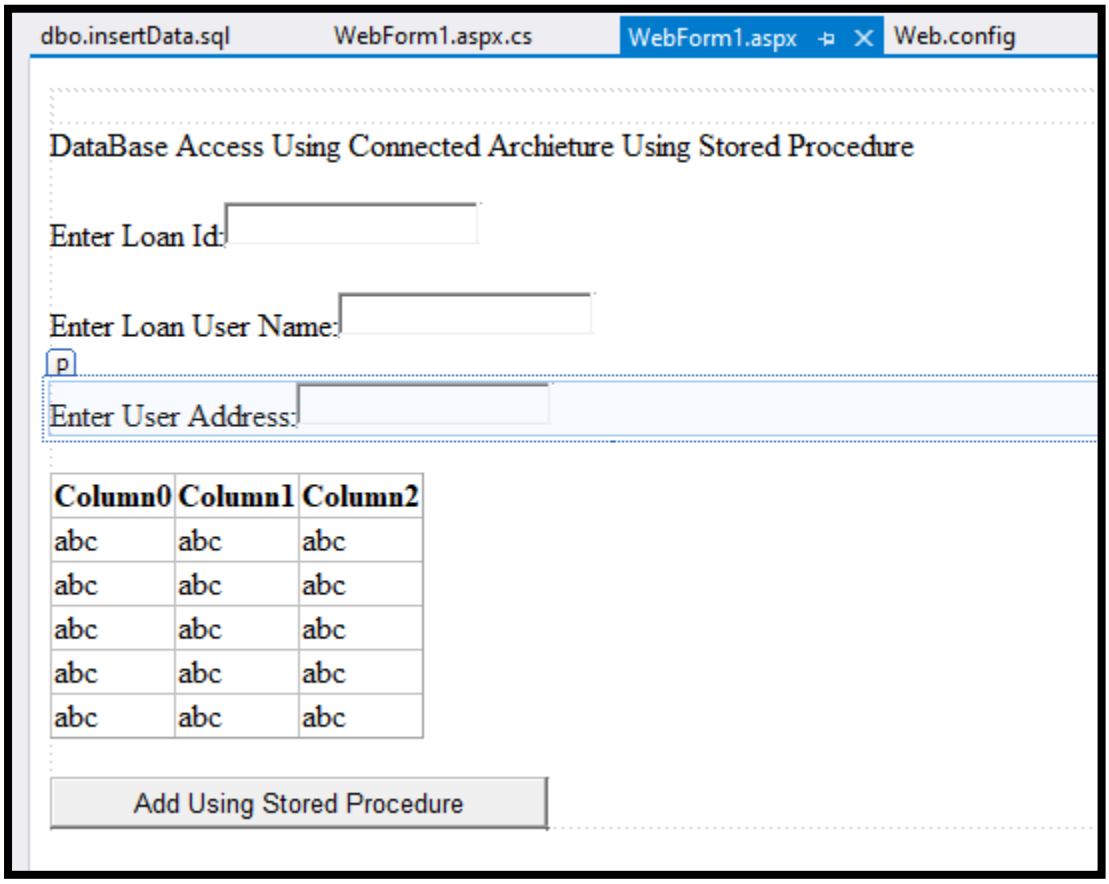
Reusable:

Security:

Performance:

Stored procedures (SPs) in SQL Server are just like procedures/routines in other DBMSs or programming languages. Each procedure has one or more statements. In our case, these are SQL statements. So, you can write a procedure that will – insert new data, update or delete existing, retrieve data using the SELECT statement. And even better, you can combine more (different statements) in the stored procedures. Also, inside the procedure, you can call another SP, function, use the IF statement, etc. Therefore, it's pretty obvious SP can do much more than a single select query.

WebForm1.aspx:



Source code:

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

<!DOCTYPE html>

<html xmlns="http://www.w3.org/1999/xhtml">
<head runat="server">
    <title></title>
</head>
<body>
    <form id="form1" runat="server">
        <div>
        </div>
        <asp:Label ID="Label1" runat="server" Text="DataBase Access Using Connected
Archieture Using Stored Procedure"></asp:Label>
        <p>
            <asp:Label ID="Label2" runat="server" Text="Enter Loan Id:"></asp:Label>
            <asp:TextBox ID="txtRollNo" runat="server"></asp:TextBox>
        </p>
        <asp:Label ID="Label3" runat="server" Text="Enter Loan User
Name:"></asp:Label>
        <asp:TextBox ID="txtName" runat="server"></asp:TextBox>
        <p>
            <asp:Label ID="Label4" runat="server" Text="Enter User
Address:"></asp:Label>
```

```
            <asp:TextBox ID="txtAddress" runat="server"></asp:TextBox>
        </p>
        <asp:GridView ID="gvStudDetails" runat="server">
        </asp:GridView>
        <p>
            <asp:Button ID="Button5" runat="server" OnClick="Button5_Click" Text="Add
Using Stored Procedure" />
        </p>
    </form>
</body>
</html>
```

WebForm1.aspx.cs:

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Web;
using System.Web.UI;
using System.Web.UI.WebControls;

using System.Configuration;//add this for connectionString from web.config file
using System.Data;
using System.Data.SqlClient;//name spaces for MS SQL server database classes


namespace ConnectedArchietectureStoredProcedure
{
    public partial class WebForm1 : System.Web.UI.Page
    {

            static string conStr =
ConfigurationManager.ConnectionStrings["LoanDB"].ToString();
            SqlConnection conn = null;
            SqlCommand cmd = null;
            SqlDataReader dr = null;
            DataTable dt = null;

            public void clearTextBox()
            {
                txtRollNo.Text = "";
                txtName.Text = "";
                txtAddress.Text = "";
            }
            public void showData()
            {
                try
                {
                    cmd = new SqlCommand("SELECT * FROM loan", conn);
                    //cmd=new SqlCommand();
                    //cmd.Connection=conn;
                    //cmd.CommandText="SELECT * FROM stud";
                    //cmd.CommandType=COmmandType.Text;
                    if (conn.State == ConnectionState.Closed)
                    {
                        conn.Open();
                    }
                    dt = new DataTable();
                    dr = cmd.ExecuteReader();
                    dt.Load(dr);
                    gvStudDetails.DataSource = dt;
```

```
                    gvStudDetails.DataBind();
                }
                catch (Exception ex)
                {
                    Response.Write("<script
type=\"text/javascript\">alert('Exception!'+ex.Message);</script>");
                }
                finally
                {
                    conn.Close();
                }
            }
            protected void Page_Load(object sender, EventArgs e)
            {
                conn = new SqlConnection(conStr);
                showData();
            }


            protected void Button5_Click(object sender, EventArgs e)
            {
                try
                {
                    if (txtRollNo.Text != "" && txtName.Text != "" && txtAddress.Text
!= "")
                    {
                        cmd = new SqlCommand();
                        if (conn.State == ConnectionState.Closed)
                        {
                            conn.Open();
                        }
                        cmd.Connection = conn;
                        //set command type as stored procedure
                        cmd.CommandType = CommandType.StoredProcedure;
                        //pass the stored procedure name
                        cmd.CommandText = "insertData";

                        cmd.Parameters.Add(new SqlParameter("@LoanId",
SqlDbType.SmallInt)).Value = Convert.ToInt16(txtRollNo.Text);
                        cmd.Parameters.Add(new SqlParameter("@Name",
SqlDbType.VarChar)).Value = txtName.Text;
                        cmd.Parameters.Add(new SqlParameter("@add",
SqlDbType.VarChar)).Value = txtAddress.Text;

                        int r = cmd.ExecuteNonQuery();
                        if (r != 0)
                        {
                            Response.Write("<script
type=\"text/javascript\">alert('Record inserted successfully!');</script>");
                        }
                        else
                        {
                            Response.Write("<script
type=\"text/javascript\">alert('Record not inserted successfully');</script>");

                        }


                    }
                    else
                    {
```

```
                        Response.Write("<script type=\"text/javascript\">alert('Please
enter all details properly');</script>");
                    }
                }
                catch (Exception ex)
                {
                    Response.Write("<script
type=\"text/javascript\">alert('Exception!'+ex.Message);</script>");
                }
                finally
                {
                    conn.Close();
                    clearTextBox();
                    showData();
                }

            }

    }
}
```

WebConfig:

```
<?xml version="1.0" encoding="utf-8"?>
<!--
  For more information on how to configure your ASP.NET application, please visit
  https://go.microsoft.com/fwlink/?LinkId=169433
  -->
<configuration>
  <system.web>
    <compilation debug="true" targetFramework="4.7.2" />
    <httpRuntime targetFramework="4.7.2" />
  </system.web>
  <system.codedom>
    <compilers>
      <compiler language="c#;cs;csharp" extension=".cs"
type="Microsoft.CodeDom.Providers.DotNetCompilerPlatform.CSharpCodeProvider,
Microsoft.CodeDom.Providers.DotNetCompilerPlatform, Version=2.0.1.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35" warningLevel="4"
compilerOptions="/langversion:default /nowarn:1659;1699;1701" />
      <compiler language="vb;vbs;visualbasic;vbscript" extension=".vb"
type="Microsoft.CodeDom.Providers.DotNetCompilerPlatform.VBCodeProvider,
Microsoft.CodeDom.Providers.DotNetCompilerPlatform, Version=2.0.1.0, Culture=neutral,
PublicKeyToken=31bf3856ad364e35" warningLevel="4"
compilerOptions="/langversion:default /nowarn:41008 /define:_MYTYPE=\&quot;Web\&quot;
/optionInfer+" />
    </compilers>
  </system.codedom>
       <connectionStrings>
              <add name="LoanDB"
                     connectionString="Data Source=DESKTOP-4Q70GOP\SQLEXPRESS;Initial
Catalog=LoanDB;Integrated Security=True"
                     providerName="System.Data.SqlClient"/>
       </connectionStrings>
</configuration>
```

SqlStoredProcedure:

SQLQuery17.sql -...P-4Q70GOP\HP (62)) | SQLQuery15.sql -...P-4Q70GOP\HP (56))

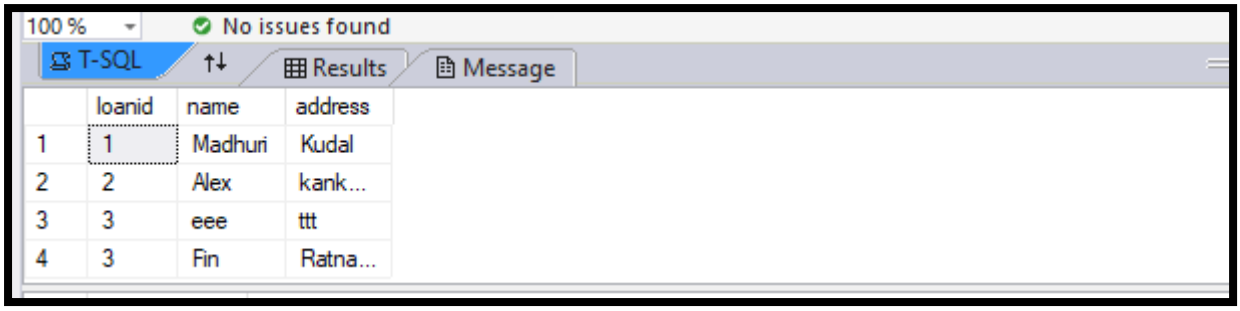
```
-- ============================================
-- Template generated from Template Explorer using:
-- Create Procedure (New Menu).SQL
--
-- Use the Specify Values for Template Parameters
-- command (Ctrl-Shift-M) to fill in the parameter

GO
   -- ============================================
-- Template generated from Template Explorer using:
-- Create Procedure (New Menu).SQL
--
-- Use the Specify Values for Template Parameters
-- command (Ctrl-Shift-M) to fill in the parameter
-- values below.
--
-- This block of comments will not be included in
create procedure insertData(@LoanId int,@Name varchar(35),@Add varchar(35))
as
begin
insert into loan values (@LoanId,@Name,@Add)
SET NOCOUNT ON;
select * from loan;
end
GO
```

Execute Stored Procedure

The stored procedure [dbo].[insertData] requires the following parameters:

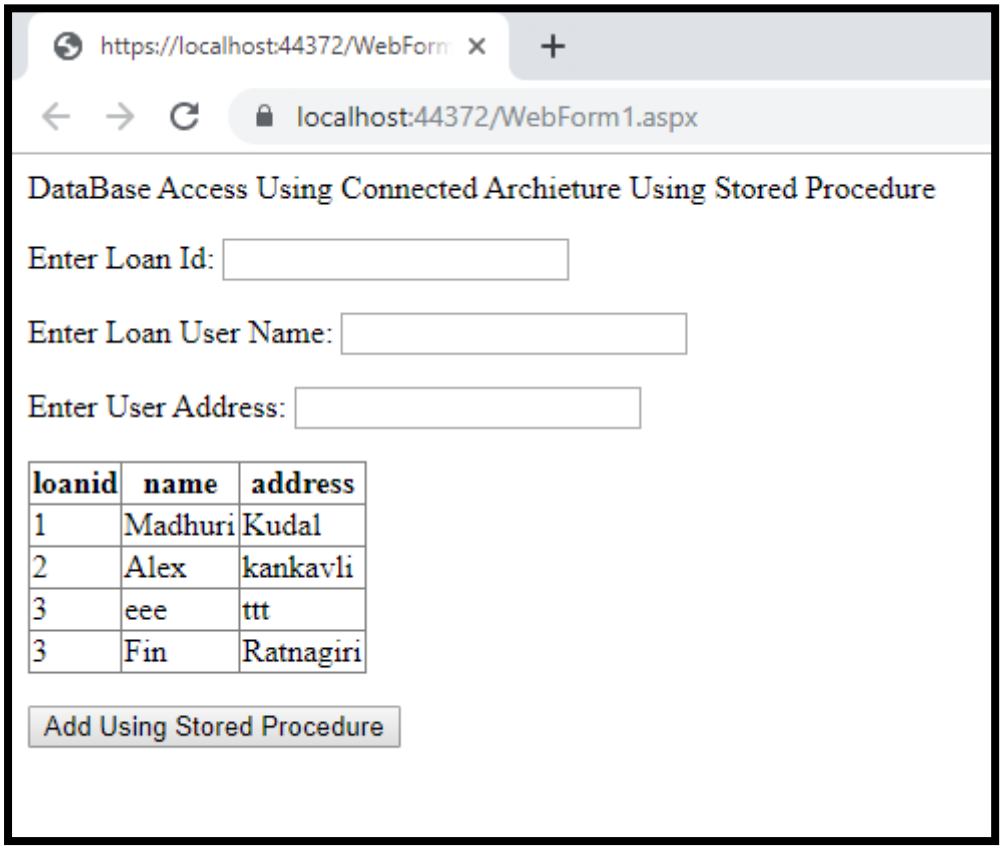
Name	Data Type	Out	Null	Default	Value
@LoanId	int	No	☐	☐	3
@Name	varchar(35)	No	☐	☐	Fin
@Add	varchar(35)	No	☐	☐	Ratnagiri

OK Cancel

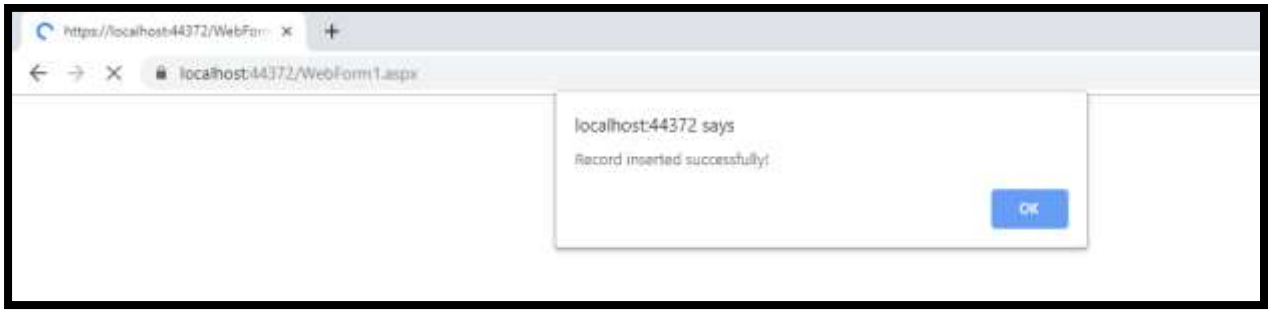


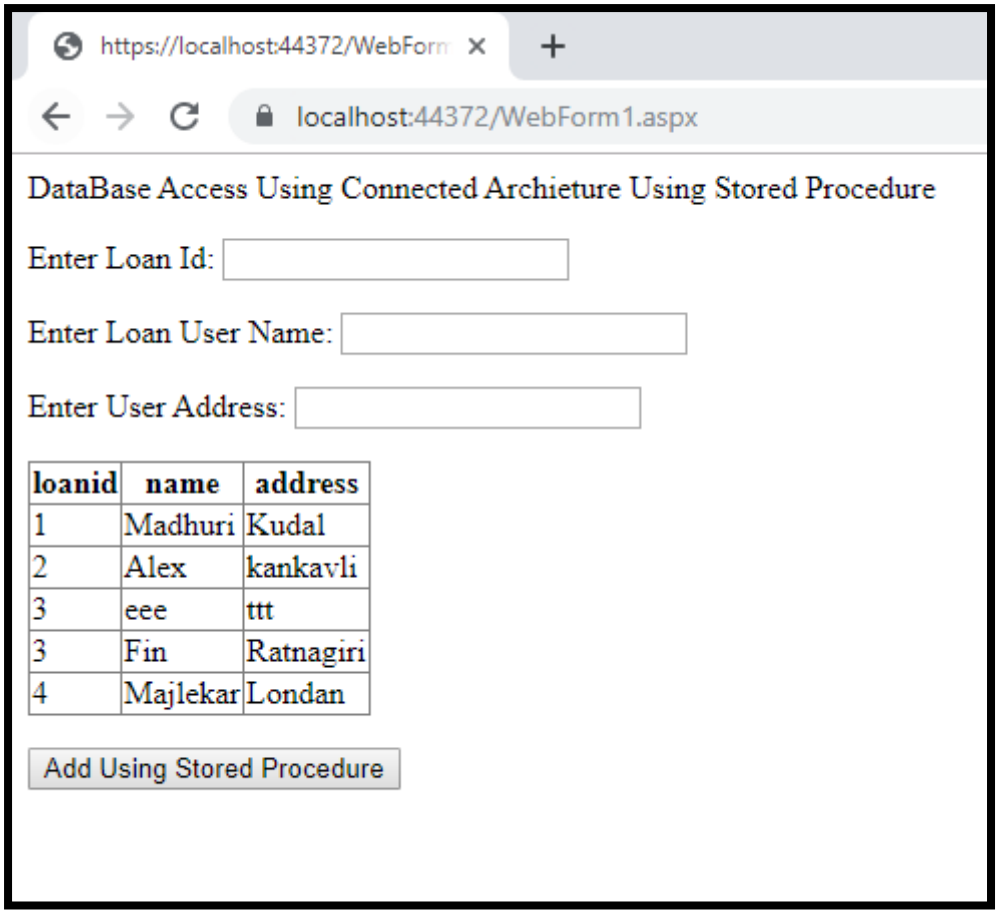
	loanid	name	address
1	1	Madhuri	Kudal
2	2	Alex	kank...
3	3	eee	ttt
4	3	Fin	Ratna...

Output:



loanid	name	address
1	Madhuri	Kudal
2	Alex	kankavli
3	eee	ttt
3	Fin	Ratnagiri




https://localhost:44372/WebForm
localhost:44372/WebForm1.aspx
DataBase Access Using Connected Archieture Using Stored Procedure
Enter Loan Id:
Enter Loan User Name:
Enter User Address:
loanid name address
1 Madhuri Kudal
2 Alex kankavli
3 eee ttt
3 Fin Ratnagiri
4 Majlekar Londan
Add Using Stored Procedure