

Лабораторная работа № 6 Использование WCF-сервисов в Silverlight	Студент, группа	Голубев А. В.
	Дата выполнения	
	Подпись	
	Дата отчёта	
	Оценка	
	Подпись	

Цель работы: получение общих сведений о технологии Silverlight, получение практических навыков создания WCF-сервисов и их использование в Silverlight-приложении.

Задачи:

1. Создать WCF-сервис для обработки данных, используя информацию предыдущих лабораторных работ
2. Создать Silverlight-форму использующую разработанный WCF-сервис

Задание: создать многопользовательский чат.

Скриншоты:

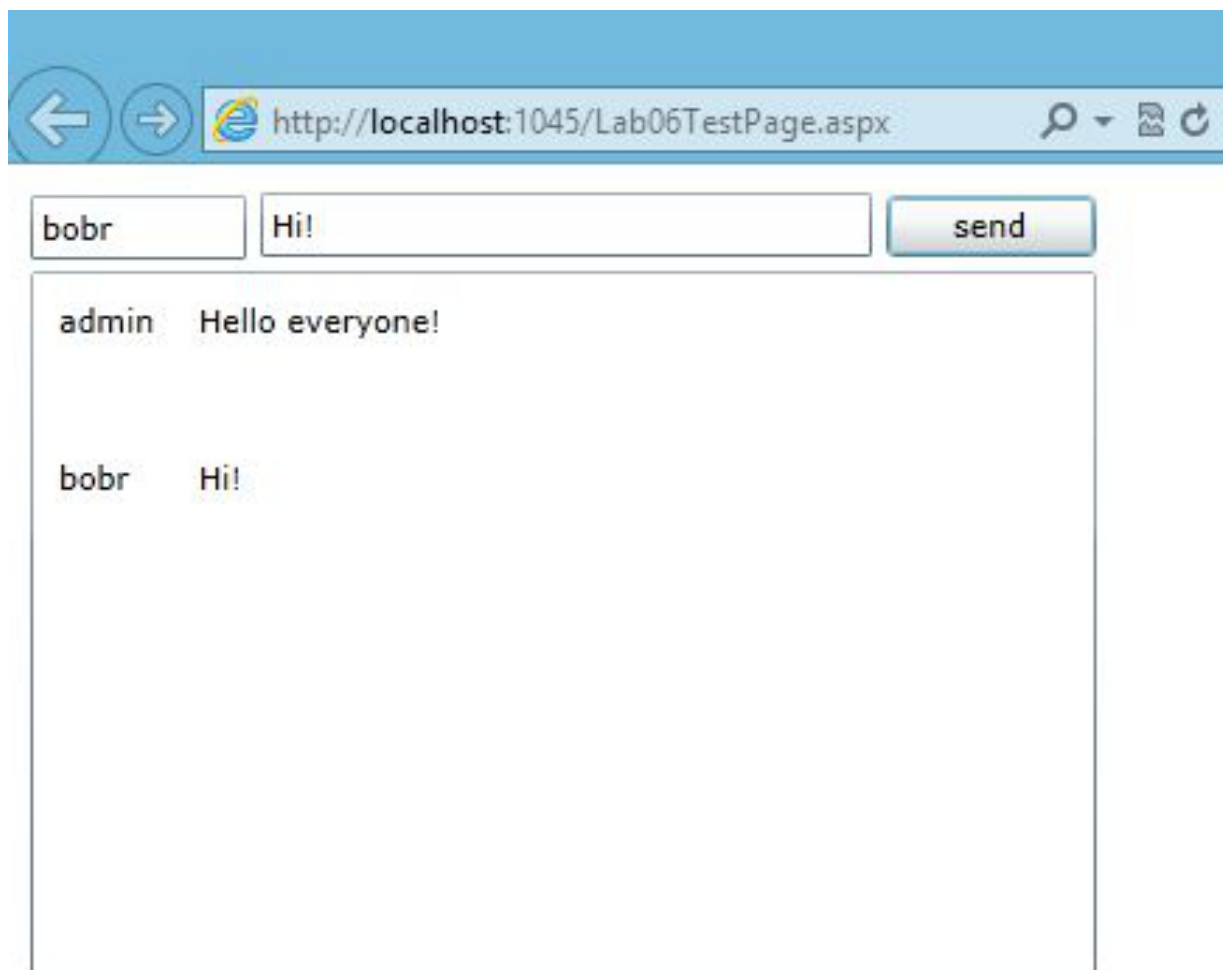


Рисунок 1 — Главная страница с Silverlight-формой

Исходный код:

Главная страница

```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Net;
5  using System.Windows;
6  using System.Windows.Data;
7  using System.Windows.Controls;
8  using System.Windows.Documents;
9  using System.Windows.Input;
10 using System.Windows.Media;
11 using System.Windows.Media.Animation;
12 using System.Windows.Media.Imaging;
13 using System.Windows.Shapes;
14 using System.Globalization;
15
16 namespace Lab06
17 {
18     public partial class MainPage : UserControl
19     {
20         public MainPage()
21         {
22             InitializeComponent();
23             System.Windows.Threading.DispatcherTimer myDispatcherTimer = new System.Windows.Threading.
DispatcherTimer();
24             myDispatcherTimer.Interval = new TimeSpan(0, 0, 0, 0, 1000);
25             myDispatcherTimer.Tick += new EventHandler(CheckBD);
26             myDispatcherTimer.Start();
27         }
28
29         public void CheckBD(object o, EventArgs sender)
30         {
31             ChatService.ChatServiceSoapClient catalogService = new ChatService.ChatServiceSoapClient();
32             catalogService.GetChatCompleted += new EventHandler<ChatService.GetChatCompletedEventArgs>(
getChat);
33             catalogService.GetChatAsync();
34         }
35
36         private void getChat(object sender, ChatService.GetChatCompletedEventArgs e)
37         {
38             if (e.Error == null)
39             {
40                 ChatBox.ItemsSource = e.Result;
41             }
42         }
43         private void Button_Click(object sender, RoutedEventArgs e)
44         {
45             ChatService.ChatServiceSoapClient catalogService = new ChatService.ChatServiceSoapClient();
46             ChatService.User user = new ChatService.User();
47             user.Name = username.Text;
48             user.Message = messagebox.Text;
49             catalogService.InsertMessageAsync(user);
50         }
51     }
52 }
```

Сервис

```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4  using System.Web;
5  using System.Web.Services;
6  using System.Data;
7  using System.Data.SqlClient;
8  using System.Text;
9  using System.Configuration;
10
11 namespace Lab06.Web
12 {
```

```

13 [WebService(Namespace = "http://tempuri.org/")]
14 [WebServiceBinding(ConformsTo = WsiProfiles.BasicProfile1_1)]
15 [System.ComponentModel.ToolboxItem(false)]
16 public class ChatService : System.Web.Services.WebService
17 {
18
19     [WebMethod]
20     public List<User> GetChat()
21     {
22         List<User> userList = new List<User>();
23         using (SqlConnection connect = new SqlConnection(ConfigurationManager.ConnectionStrings["DB"].
ConnectionStrings))
24         {
25             if (connect != null)
26             {
27                 StringBuilder sb = new StringBuilder();
28                 sb.Append("select * from Users");
29                 SqlDataAdapter da = new SqlDataAdapter(sb.ToString(), connect);
30                 DataTable dt = new DataTable();
31                 da.Fill(dt);
32                 if (dt.Rows.Count > 0)
33                 {
34                     foreach (DataRow curr in dt.Rows)
35                     {
36                         userList.Add(new User(curr["Name"].ToString(), curr["Message"].ToString()));
37                     }
38                 }
39             }
40         }
41         return userList;
42     }
43     [WebMethod]
44     public void InsertMessage(User msg)
45     {
46         SqlConnection sqlCon = new SqlConnection(ConfigurationManager.ConnectionStrings["DB"].
ConnectionStrings);
47         SqlCommand nonqueryCommand = sqlCon.CreateCommand();
48         sqlCon.Open();
49         nonqueryCommand.CommandText = "INSERT INTO Users (Name, Message) VALUES (@Name, @Message)";
50         nonqueryCommand.Parameters.Add("@Name", SqlDbType.VarChar, 50);
51         nonqueryCommand.Parameters.Add("@Message", SqlDbType.VarChar, msg.Message.Length);
52         nonqueryCommand.Parameters["@Name"].Value = msg.Name;
53         nonqueryCommand.Parameters["@Message"].Value = msg.Message;
54         nonqueryCommand.ExecuteNonQuery();
55     }
56 }
57 public class User
58 {
59     public User() { }
60     public User(string name, string message)
61     {
62         _name = name;
63         _message = message;
64     }
65     private string _name;
66     public string Name
67     {
68         get { return _name; }
69         set { _name = value; }
70     }
71     private string _message;
72     public string Message
73     {
74         get { return _message; }
75         set { _message = value; }
76     }
77 }
78 }

```

Разметка главной страницы

```

1 <UserControl x:Class="Lab06.MainPage"
2     xmlns="http://schemas.microsoft.com/winfx/2006/xaml/presentation"
3     xmlns:x="http://schemas.microsoft.com/winfx/2006/xaml"

```

```

4      xmlns:d="http://schemas.microsoft.com/expression/blend/2008"
5      xmlns:mc="http://schemas.openxmlformats.org/markup-compatibility/2006"
6      mc:Ignorable="d"
7      d:DesignHeight="300" d:DesignWidth="400">
8      <UserControl.Resources>
9          <DataTemplate x:Key="DataTemplate">
10             <Grid>
11                 <Grid.RowDefinitions>
12                     <RowDefinition Height="50"/>
13                 </Grid.RowDefinitions>
14                 <Grid.ColumnDefinitions>
15                     <ColumnDefinition Width="50"/>
16                     <ColumnDefinition Width="*"/>
17                 </Grid.ColumnDefinitions>
18                 <TextBlock Height="50" Text="{Binding Name, Mode=OneWay}" Grid.Column="0" Margin="5"/>
19                 <TextBlock Height="50" Text="{Binding Message, Mode=OneWay}" Grid.Column="1" Margin="5"/>
20             </Grid>
21         </DataTemplate>
22     </UserControl.Resources>
23
24     <Grid x:Name="LayoutRoot" Background="White">
25         <ListBox x:Name="ChatBox" HorizontalAlignment="Left" Height="252" Margin="10,38,0,0"
26             VerticalAlignment="Top" Width="380" ItemTemplate="{StaticResource DataTemplate}"/>
27         <TextBox x:Name="messagebox" HorizontalAlignment="Left" Height="23" Margin="92,10,0,0"
28             TextWrapping="Wrap" VerticalAlignment="Top" Width="218" Text="message"/>
29         <Button Content="send" HorizontalAlignment="Left" Margin="315,11,0,0" VerticalAlignment="Top"
30             Width="75" Click="Button_Click"/>
31         <TextBox x:Name="username" HorizontalAlignment="Left" Height="23" Margin="10,11,0,0" TextWrapping=
32             "Wrap" Text="user" VerticalAlignment="Top" Width="77"/>
33     </Grid>
34 </UserControl>

```