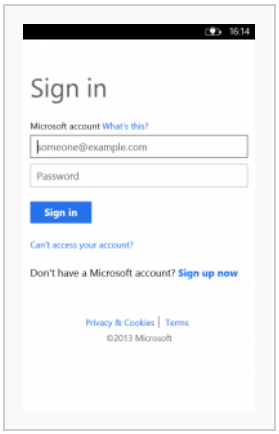
Birthday Calendar for Windows Phone

This article demonstrates how to integrate Facebook friends birthday events to a calendar using Microsoft Live Connect API.

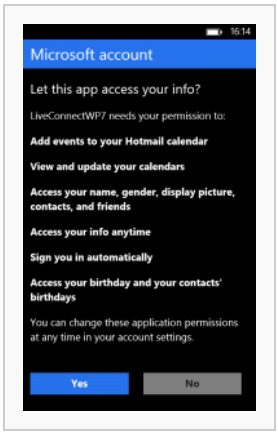
Introduction

Windows Phone Calendar API doesn't provide access to Facebook events/birthday. So the Facebook events/birthday that we see in the device default calendar can't be replicated into our apps. To overcome this we will use some tips and tricks, and Microsoft Live Connect SDK to get the Facebook birthday events in our app. If you are new to Live Connect SDK, suggest you to visit Getting user information with the Live Connect API for Windows Phone 7 article for better understanding.

Note: To fetch the Facabook birthday events using Live Connect SDK, please make sure your Microsoft account is linked with your Facebook account.



Microsoft Account login



Authentication

Birthday events on calendar

Implementation

Create a standard Windows Phone Project

Let's create a standard Windows Phone Application Project

- Launch **Visual Studio**
- Click on **File**
- Click on **New Project**
- Select **Windows Phone Application** (Visual C# Template)
- Add **Name** and **Location** of the project
- Click **OK** to create the project.

Adding UI controls on application page

We add a Live SDK `SignInButton` for login to Microsoft account along with an Image, TextBlock and a `Calendar` element in **MainPage.xaml** file.

Note: The calendar is created using Telerik RadControls for Windows Phone 8.

```
  <!--TitlePanel contains the name of the application and page title-->
        <StackPanel x:Name="TitlePanel"  Orientation="Horizontal" Grid.Row="0"
Margin="12,0,0,0">
            <TextBlock Text="BIRTHDAY CALENDAR" Style="{StaticResource
PhoneTextNormalStyle}" Margin="12,0,80,0" VerticalAlignment="Top"/>
            <live:SignInButton Name="btnSignin" ClientId="Client ID" Branding="Outlook"
Scopes="wl.events_create wl.calendars_update wl.basic wl.offline_access wl.signin
wl.contacts_birthday wl.calendars" TextType="SignIn"
SessionChanged="btnSignin_SessionChanged" HorizontalAlignment="Left"
VerticalAlignment="Top"   />
        </StackPanel>
        <!--ContentPanel - place additional content here-->
        <Grid x:Name="ContentPanel" Grid.Row="1" Margin="12,0,12,0">
            <StackPanel Orientation="Vertical">
            <StackPanel Margin="12,0,0,0" Orientation="Horizontal">
                <Image Name="userImage" Height="100" Width="100" VerticalAlignment="Top"
HorizontalAlignment="Left"/>
                <StackPanel Orientation="Vertical" Margin="12,0,0,0">
                    <TextBlock Name="userGreetings" Text=""  Style="{StaticResource
```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```
PhoneTextNormalStyle}" ></TextBlock>
                    <TextBlock Name="userName" Text="" FontWeight="Bold"
Style="{StaticResource PhoneTextExtraLargeStyle}"></TextBlock>
                </StackPanel>
            </StackPanel>
                <StackPanel VerticalAlignment="Bottom" Margin="0,0,0,0" >
                    <telerikInput:RadCalendar
SelectedValueChanged="RadCalendar_SelectedValueChanged_1"
WeekNumbersVisibility="Visible" Height="450"  MonthInfoDisplayMode="Large"
VerticalAlignment="Bottom" AppointmentSource="{StaticResource CalendarAppointments}">
                    </telerikInput:RadCalendar>
                    <telerikPrimitives:RadDataBoundListBox x:Name="AppointmentsList"
Height="129" Margin="-12,8,0,0" EmptyContent="There are no birthday for the selected
day.">
                        <telerikPrimitives:RadDataBoundListBox.ItemTemplate>
                            <DataTemplate>
                                <StackPanel Orientation="Vertical">
                                    <StackPanel Orientation="Horizontal"
Margin="0,0,0,12">
                                        <Rectangle Fill="{StaticResource
PhoneAccentBrush}" HorizontalAlignment="Left" VerticalAlignment="Top" Width="8"
Height="32"  Margin="12,0,12,0"/>
                                        <TextBlock Text="{Binding Subject}"
FontWeight="Bold" FontFamily="{StaticResource PhoneFontFamilySemiLight}"
FontSize="{StaticResource PhoneFontSizeSmall}" Margin="0, -3, 0, -3"/>
                                    </StackPanel>
                                 </StackPanel>
                            </DataTemplate>
                        </telerikPrimitives:RadDataBoundListBox.ItemTemplate>
                    </telerikPrimitives:RadDataBoundListBox>
                </StackPanel>
            </StackPanel>
        </Grid>
```

Adding code behind

- Add the following List class to store Facebook birthday events.

```
public static class BirthdayData
{
       public static List<BirthdayStructure> ListBirthdayData = new
List<BirthdayStructure>();
       public static string BirthdayCalendarId = null;
 }
public class BirthdayStructure
{
      public string id { get; set; }
      public string name { get; set; }
      public string start_time { get; set; }
      public string end_time { get; set; }
}
```

- Add the following code to create a Live Session and get user information and profile picture.

```
  // create a session
                LiveSession.client = new LiveConnectClient(e.Session);
                LiveSession.Session = e.Session;
                // get user info
               LiveOperationResult operationResultMe = await
LiveSession.client.GetAsync("me");
               dynamic resultMe = operationResultMe.Result;
                //get user profile picture
               LiveOperationResult operationResultPicture = await
LiveSession.client.GetAsync("me/picture");
               dynamic resultPicture = operationResultPicture.Result;
               try
```


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```
                {
                    dynamic meResult = operationResultMe.Result;
                    if (meResult.first_name != null &&
                        meResult.last_name != null)
                    {
                        userGreetings.Text = "Hello";
                        userName.Text =  meResult.first_name + " " +   meResult.last_name
+ "!";
                        userImage.Source = new BitmapImage(new
Uri(resultPicture.location, UriKind.RelativeOrAbsolute));
                    }
                    else
                    {
                        userGreetings.Text = "Hello, sign in successful!";
                    }
                }
                catch (LiveConnectException exception)
                {
                    userGreetings.Text = "API Error : " +
                        exception.Message;
                }
```

- Add the following code to get the user's calendars id. This code will get all the calendar id added to the use's account.

```
         LiveConnectClient liveClientCal = new LiveConnectClient(LiveSession.session);
         LiveOperationResult operationResultCal = await
liveClientCal.GetAsync("me/calendars");
         dynamic resultCal = operationResultCal.Result;
         List<object> dataCal = (List<object>)operationResultCal.Result["data"];
```

- Add the following code to check the existence of user's Birthday calendar and get the next 30 days birthday event details and add it to calendar.

```
if (tempCalName == "Birthday calendar")
{
                           BirthdayData.BirthdayCalendarId = (string)calInfo["id"];
                           LiveConnectClient liveClient = new
LiveConnectClient(LiveSession.session);
                           LiveOperationResult operationResult = await
liveClient.GetAsync(BirthdayData.BirthdayCalendarId + "/events");
                           dynamic result = operationResult.Result;
                           List<object> data =
(List<object>)operationResult.Result["data"];
                           BirthdayData.ListBirthdayData.Clear();
                           foreach (IDictionary<string, object> bdayInfo in data)
                           {
                               string tempTime = "00:00:00";
                               BirthdayStructure bdayData = new BirthdayStructure();
                               bdayData.id = (string)bdayInfo["id"];
                               bdayData.name = (string)bdayInfo["name"];
                               string tempStartTime = (string)bdayInfo["start_time"];
                               string[] splitStartTime = tempStartTime.Split(new Char[]
{ 'T' });
                               bdayData.start_time =
splitStartTime.GetValue(0).ToString()+" "+tempTime;
                               string tempEndTime = (string)bdayInfo["end_time"];
                               string[] splitEndTime = tempEndTime.Split(new Char[] {
'T' });
                               bdayData.end_time = splitEndTime.GetValue(0).ToString()+"
"+tempTime;
                               BirthdayData.ListBirthdayData.Add(bdayData);
                           }
}
```

- Add the following code to display the birthday events of a selected date on the calendar.

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```
private void DisplayAppointmentsForDate(DateTime date)
{
            appointmentsSource.FetchData(date, date.AddDays(1));
            this.AppointmentsList.ItemsSource =
appointmentsSource.GetAppointments((IAppointment appointment) =>
            {
                DateTime startDate = appointment.StartDate;
                DateTime endDate = appointment.EndDate;
                DateTime calendarStartDate = date.Date;
                DateTime calendarEndDate = date.AddDays(1);
                if (calendarStartDate == startDate && calendarEndDate == endDate)
                    return true;
                return false;
            });
        }
        //display all the birthday of a selected date
        private void RadCalendar_SelectedValueChanged_1(object sender,
ValueChangedEventArgs<object> e)
        {
            if (e.NewValue == null)
            {
                this.AppointmentsList.ItemsSource = null;
                return;
            }
            DisplayAppointmentsForDate((e.NewValue as DateTime?).Value);
}
```

Summary

This example uses the trial version of Telerik RadControls for Windows Phone 8, for production purpose please download the license copy. Most of the code are called from a PhoneClassLibrary which is a part of the project reference. Please download the source code for better understanding of the code flow.

Source Code

- The full source code of the example is available here: File:BirthdayCalendar.zip

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