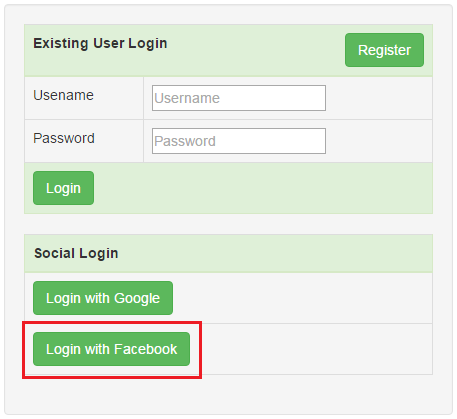
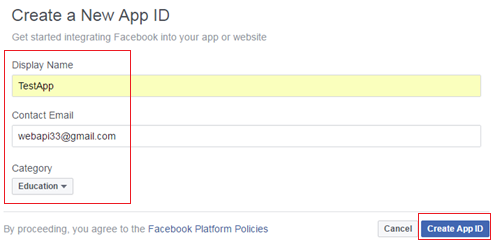
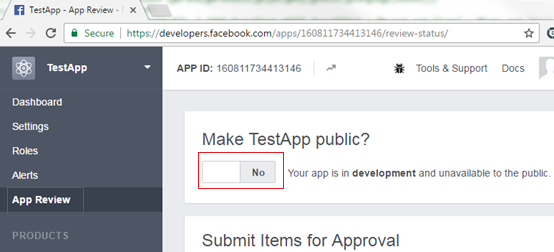
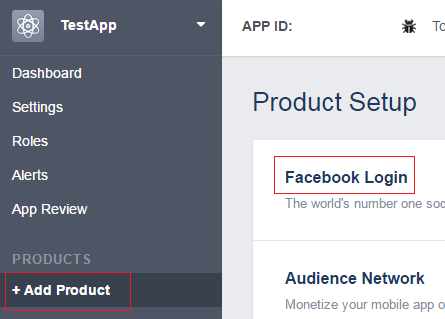
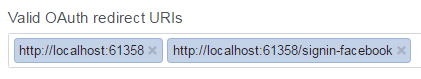
In this video we will discuss **using Facebook authentication with ASP.NET Web API**. This is continuation to [Part 28](http://csharp-video-tutorials.blogspot.com/2016/12/aspnet-web-api-google-authentication.html). Please watch [Part 28](http://csharp-video-tutorials.blogspot.com/2016/12/aspnet-web-api-google-authentication.html) from [ASP.NET Web API tutorial](https://www.youtube.com/playlist?list=PL6n9fhu94yhW7yoUOGNOfHurUE6bpOO2b)before proceeding.   
  
  
  
   
  
When the user clicks **"Login with Facebook"** button, he will be redirected to Facebook login page. The user will then provide his Facebook credentials. Once the login is successful, the user will be redirected to our application with an access token, which is a proof that the user is successfully authenticated and our web application grants access to the protected resources.   
  
  
  
To use Facebook account for authentication, we will have to first register our application with Facebook. Here are the steps to register your application with Facebook. Once we successfully register our application, we will be given a **Client ID** and **Client Secret**. We need both of these for using Facebook authentication with our Web API service.   
  
Step 1 : To register your application go to   
<https://developers.facebook.com/>  
  
Step 2 : Login with your Facebook account. 

* Click "Create App" button
* Provide a name for the App in the "Display Name" textbox. I named it TestApp
* Provide yor email in the "Contact Email" textbox
* Select a Category. I selected "Education"
* Finally, click "Create App ID" button

   
  
Step 3 : Next we need to make the App that we just created **public**. To make the App, public, Click on **"App Review"** menu item on the left and then click the **Yes|No** button.   
   
  
Step 4 : Next we need to add **"Facebook Login"** product to our App. To do this click "**Add Product"** menu item on the left and click **"Get Started"** button against **"Facebook Login"**   
   
  
Step 5 : In **"Valid OAuth redirect URIs"** textbox, include the URI of your application. I have my web api application running at http://localhost:61358  
  
In the same textbox we also need to include the redirect URI i.e the path in our application that users are redirected to after they have authenticated with Facebook. I have set it to http://localhost:61358/signin-facebook   
   
  
Click **"Save Changes"**  
  
Step 6 : Click **"Dashboard"**menu item on the left and you will see App ID and App Secret.  
  
**Enable Facebook OAuth authentication in ASP.NET Web API service**  
  
Step 1 : Facebook has made a breaking change to it's API in version 2.4.  The change is, in addition to the access token we also have to send the fields that we want in URI. In version 2.3 and earlier, the URI used to be as shown below. The access token is appended to the URI using a ?  
https://graph.facebook.com/v2.3/me?access\_token=ABC  
  
With version 2.4, they have changed it to as shown below. Instead of using ? we have to use & to attach the access token to the URI  
https://graph.facebook.com/v2.4/me?fields=id,email&access\_token=ABC  
  
The defualt implementation for the Facebook Client, that is provided by Microsoft attaches the access token to the URI using a ?, so we have to change it to &. To do that, 

* Add a folder to the project. Name it "Facebook"
* Add a class file to the folder. Name it FacebookBackChannelHandler.cs
* Copy and paste the following code.

using System;

using System.Net.Http;

using System.Threading;

using System.Threading.Tasks;

namespace EmployeeService.Facebook

{

    public class FacebookBackChannelHandler : HttpClientHandler

    {

        protected override async Task<HttpResponseMessage>

            SendAsync(HttpRequestMessage request,

                      CancellationToken cancellationToken)

        {

            if (!request.RequestUri.AbsolutePath.Contains("/oauth"))

            {

                request.RequestUri = new Uri(

                    request.RequestUri.AbsoluteUri.Replace("?access\_token","&access\_token"));

            }

            return await base.SendAsync(request, cancellationToken);

        }

    }

}

Step 2 : In **Startup.Auth.cs** file in **App\_Start**folder include the following code block. Use the AppID and AppSecret that we got after registering our application with Facebook. 

var facebookOptions = new FacebookAuthenticationOptions()

{

    AppId = "160811734413146",

    AppSecret = "21f2665e0aed11867fcd8d35e67d6068",

    BackchannelHttpHandler = new FacebookBackChannelHandler(),

    UserInformationEndpoint = "https://graph.facebook.com/v2.4/me?fields=id,email"

};

facebookOptions.Scope.Add("email");

app.UseFacebookAuthentication(facebookOptions);

Step 3 : On Login.html page, include the HTML for **"Login with Facebook"** button. 

<tr>

    <td>

        <input type="button" id="btnFacebookLogin"

                value="Login with Facebook" class="btn btn-success" />

    </td>

</tr>

Step 4 : Wire up the click event handler for **"Login with Facebook"** button 

$('#btnFacebookLogin').click(function () {

    window.location.href = "/api/Account/ExternalLogin?provider=Facebook&response\_type=token&client\_id=self&redirect\_uri=http%3a%2f%2flocalhost%3a61358%2fLogin.html&state=GerGr5JlYx4t\_KpsK57GFSxVueteyBunu02xJTak5m01";

});

Step 5 : In **GoogleAuthentication.js** file, modify **isUserRegistered**() and **signupExternalUser**() functions as shown below. I have included comments where the code is modified, so you know what has changed. 

function isUserRegistered(accessToken) {

    $.ajax({

        url: '/api/Account/UserInfo',

        method: 'GET',

        headers: {

            'content-type': 'application/json',

            'Authorization': 'Bearer ' + accessToken

        },

        success: function (response) {

            if (response.HasRegistered) {

                localStorage.setItem("accessToken", accessToken);

                localStorage.setItem("userName", response.Email);

                window.location.href = "Data.html";

            }

            else {

                // Pass the login provider (Facebook or Google)

                signupExternalUser(accessToken, response.LoginProvider);

            }

        }

    });

}

// Include provider parameter

function signupExternalUser(accessToken, provider) {

    $.ajax({

        url: '/api/Account/RegisterExternal',

        method: 'POST',

        headers: {

            'content-type': 'application/json',

            'Authorization': 'Bearer ' + accessToken

        },

        success: function () {

            // Use the provider parameter value instead of

            // hardcoding the provider name

            window.location.href = "/api/Account/ExternalLogin?provider=" + provider +"&response\_type=token&client\_id=self&redirect\_uri=http%3a%2f%2flocalhost%3a61358%2fLogin.html&state=GerGr5JlYx4t\_KpsK57GFSxVueteyBunu02xJTak5m01";

        }

    });

}