Lab 6 – Web API

# Description

This lab allows you to start implementing other features of MVC: Web API

# Estimated Time

This lab will take an estimated 2 hours to complete

# Deliverable

Deploy your website to Windows Azure and submit the link to Brightspace.

See “Brightspace -> Course Content -> Extra Materials -> Azure Usage” for information about deploying Azure Web Apps, Databases and Storage Accounts.

# Notes

* Be sure Visual Studio is up to date.
* Use the example code found in Week 10 to complete this lab.
* Application Demo can be found at: <http://cst8359.hopto.org/lab6>
* Web API Endpoints:
  + http://cst8359.hopto.org/lab6server/api/twitter/add
  + http://cst8359.hopto.org/lab6server/api/twitter/getlast100tweets
* Web API Description can be found at: <http://cst8359.hopto.org/lab6server/swagger/>

# Create a new MVC Core project called ‘Lab6’

1. Open Visual Studio 2015
2. Click: File -> New -> Project
3. Click: Templates -> Visual C# -> Web, select ‘ASP.NET Core Web Application (.NET Core)’
4. Name the application ‘Lab6’, save the project in your desired location and click the button ‘OK’
5. Select the ‘Empty’ ASP.NET Core Template
6. Be sure to uncheck ‘Host in the cloud’
7. Click the ‘OK’ button.

# Configure your new Web Application

1. Modify the file ‘project.json’. Replace the section:

"dependencies": {

"Microsoft.NETCore.App": {

"version": "1.0.1",

"type": "platform"

},

"Microsoft.AspNetCore.Diagnostics": "1.0.0",

"Microsoft.AspNetCore.Server.IISIntegration": "1.0.0",

"Microsoft.AspNetCore.Server.Kestrel": "1.0.1",

"Microsoft.Extensions.Logging.Console": "1.0.0"

},

with:

"dependencies": {

"Microsoft.NETCore.App": {

"version": "1.0.1",

"type": "platform"

},

"Microsoft.AspNetCore.Diagnostics": "1.0.0",

"Microsoft.AspNetCore.Server.IISIntegration": "1.0.0",

"Microsoft.AspNetCore.Server.Kestrel": "1.0.1",

"Microsoft.Extensions.Logging.Console": "1.0.0",

"Newtonsoft.Json": "9.0.1",

"Microsoft.AspNetCore.Mvc": "1.0.1"

},

1. Visual Studio should now update itself with the packages you need for this application to run.
2. Modify ‘Startup.cs’. Add the following lines to the method ‘ConfigureServices(IServiceCollection services)’”

services.AddMvc();

1. Modify ‘Startup.cs’. Replace the contents of ‘Configure(IApplicationBuilder app, IHostingEnvironment env, ILoggerFactory loggerFactory)’ with:

if (env.IsDevelopment())

{

app.UseDeveloperExceptionPage();

}

app.UseMvc(routes =>

{

routes.MapRoute(

name: "default",

template: "{controller=Home}/{action=Index}/{id?}");

});

# Create the ‘Controllers’ and ‘Views’ and ‘Models’ folders

1. Create a folder in your project called ‘Controllers’
2. Create a new Controller in a folder called ‘Home’
   1. NOTE: if you use ‘MVC Controller Class’ template from visual studio it will create all the basic code you need to have a valid controller
   2. To do so right click on the ‘Controllers’ folder, click ‘Add’, click ‘New Item’ and select the ‘MVC Controller Class’
3. Create a folder in your project called ‘Views’
4. At the root of this new ‘Views’ folder create a filed called ‘\_ViewImports.cshtml’
5. Add the following lines of code to the file ‘\_ViewImports.cshtml’

@using Lab6

@addTagHelper "\*, Microsoft.AspNetCore.Mvc.TagHelpers"

1. At the root of the ‘Views’ folder created a folder called ‘Home’
2. At the root of the project create a folder called ‘Models’

# Create the Model

1. At the root of the ‘Models’ folder create a file called ‘Tweet.cs’
   1. Use the example code located in Week 10 as an example.
2. This application does not require a database or data context.

# Create the Controller’s Actions and Views

1. Create the ‘HomeController’
2. In your HomeController create the ‘Index’ view
   1. NOTE: You can find an example of interacting with a Web API in the code examples provided in Week 10
   2. This page must implement the Bootstrap theme. An example of this can be found in ‘Extra Material’.
3. Index View
   1. Your index view must retrieve and display the last 100 posts from the Lab 6 web api
      1. Web API Endpoints:
         1. http://cst8359.hopto.org/lab6server/api/twitter/add
         2. http://cst8359.hopto.org/lab6server/api/twitter/getlast100tweets
      2. Web API Description can be found at:
         1. <http://cst8359.hopto.org/lab6server/swagger/>
4. You index view must also allow the user to post a tweet a comment to the Web API

# Lastly

1. Be prepared to completely reuse (rip off) the code examples provided in Week 10
2. Note that everyone will get to see what you are posting. Please be respectful!