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Cloud Comp. Assignment 2

Introduction:

The WeatherCloud webapp is designed to store cities and get the temperature for those cities and your location city using get requests. It uses services from https://developer.yahoo.com/yql service for the weather data, "http://ip-api.com/json" service for current location, and Facebook Developer API for Facebook user data, specificaly the user's name.

It's hosted in azure platform and is located at http://weathercloud1.azurewebsites.net

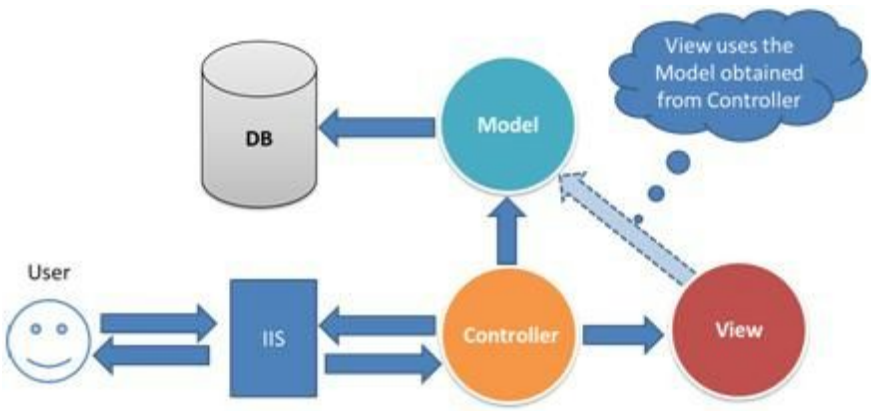
Design:

The cloud website is designed using ASP.net(MVC), HTML/CSS and Javascript/JQuery. It uses SQL server database. It relies on Model View Controller architecture where is is separation between Data, Views, and the controllers. The server comprises of three methods: Index, add(city), and remove(city), in addition to getting location based on IP and "Login with Facebook" feature which uses "CheckAuthorization()" method.

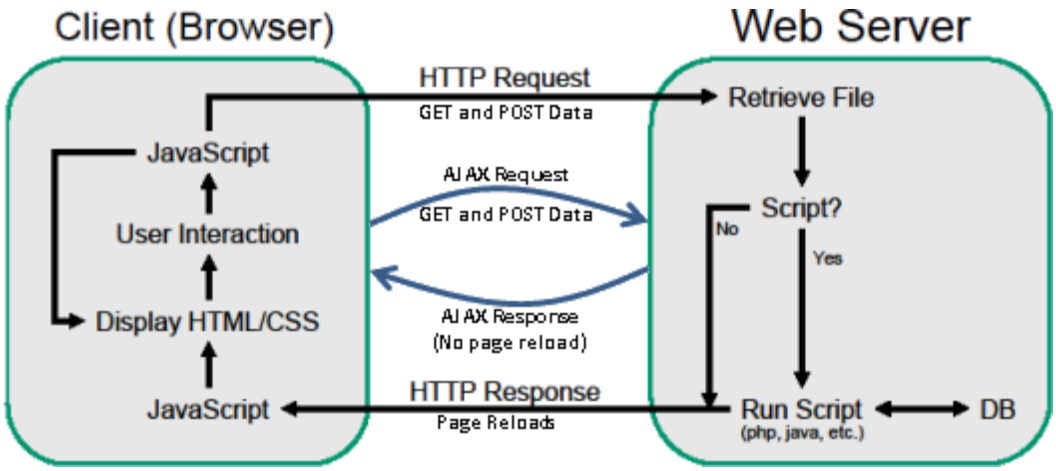
The interface is designed with AJAX technology meaning there will not be need for refresh when submitting action of add(city) or remove(city) to server. The client, after, listing cities from server database, will ask "https://developer.yahoo.com/yql" service, returing a JSON object, parsing it for the weather for each city listed, and display the temprature beside each city.

The Web app is improved by showing your current city based on your IP along with its temprature using the service "http://ip-api.com/json". It also uses Facebook API to getting the User's Facebook name, showing it beside the Welcome message, and then allowing the user to logout.

The Web App uses the default ASP.net Template, and its logic is design in the files "script.js", "HomeController.cs", the View (.chtml) files.



MVC Architecture [1]



Client Request - Server interaction using Javascript [2]

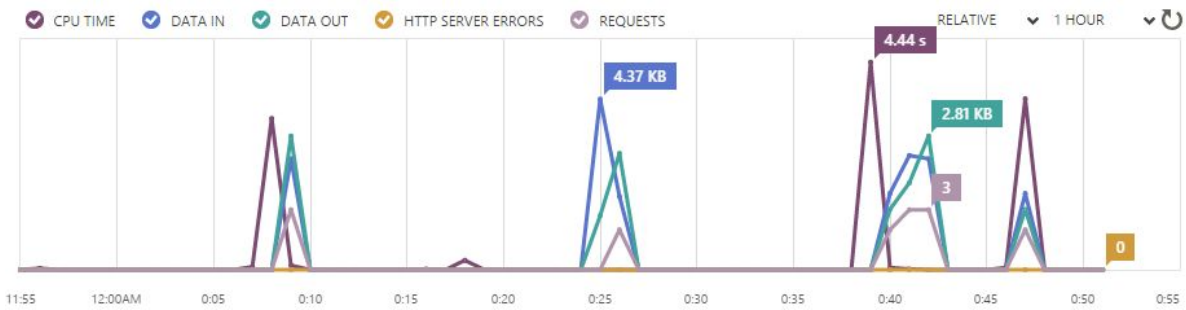
Instructions:

- Enter a city and Click “add” to add a city to store it in the database.
- Click “Login With Facebook” button to login using Facebook and Show your name beside welcoming message. You can logout by clicking “Logout” link.

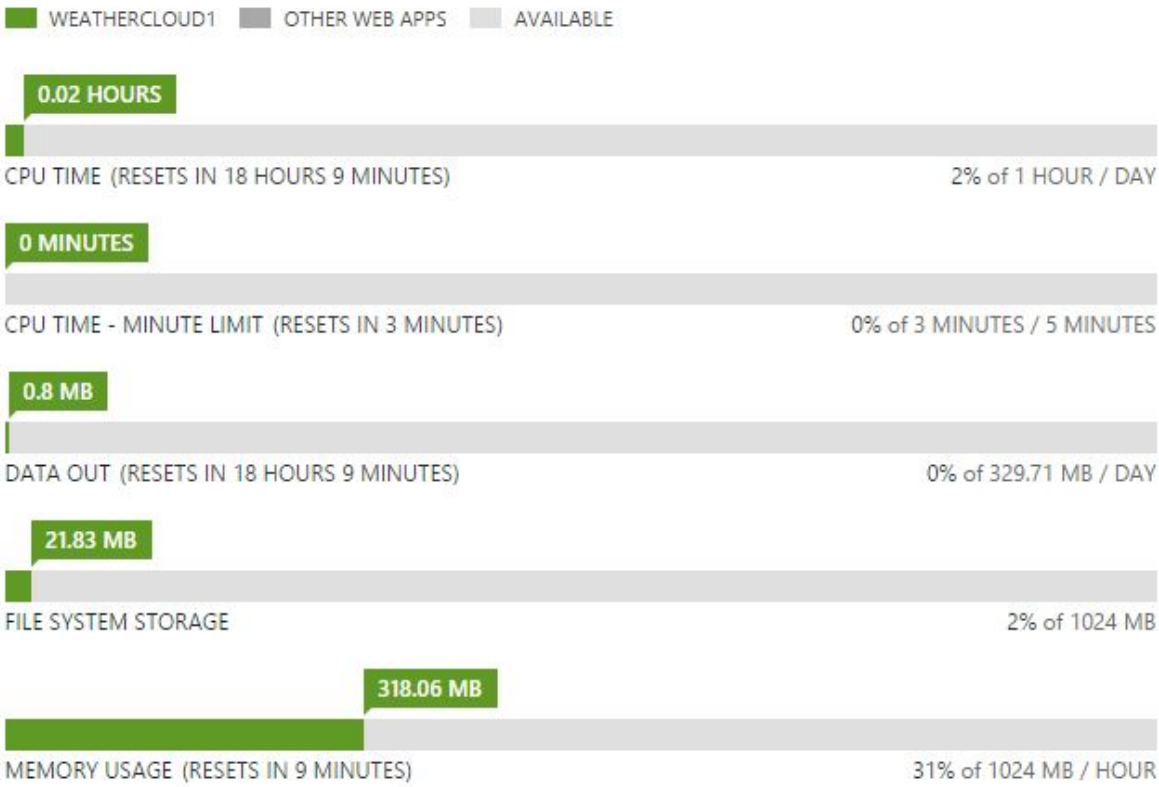
Scalability:

Microsoft Azure autoscaling feature which provides a very powerful tools to help scaling your application. You can have many instances of your Web App and scale down on them depending on rules you can set, such as the your site traffic. Moreover, you can have more instances running if you experience high traffic, but low number of instances if you have low traffic. It also ensures that your Web App is always running [3]
The free version of Azure, however, doesn’t allow these powerful tools such as having more than one instance.

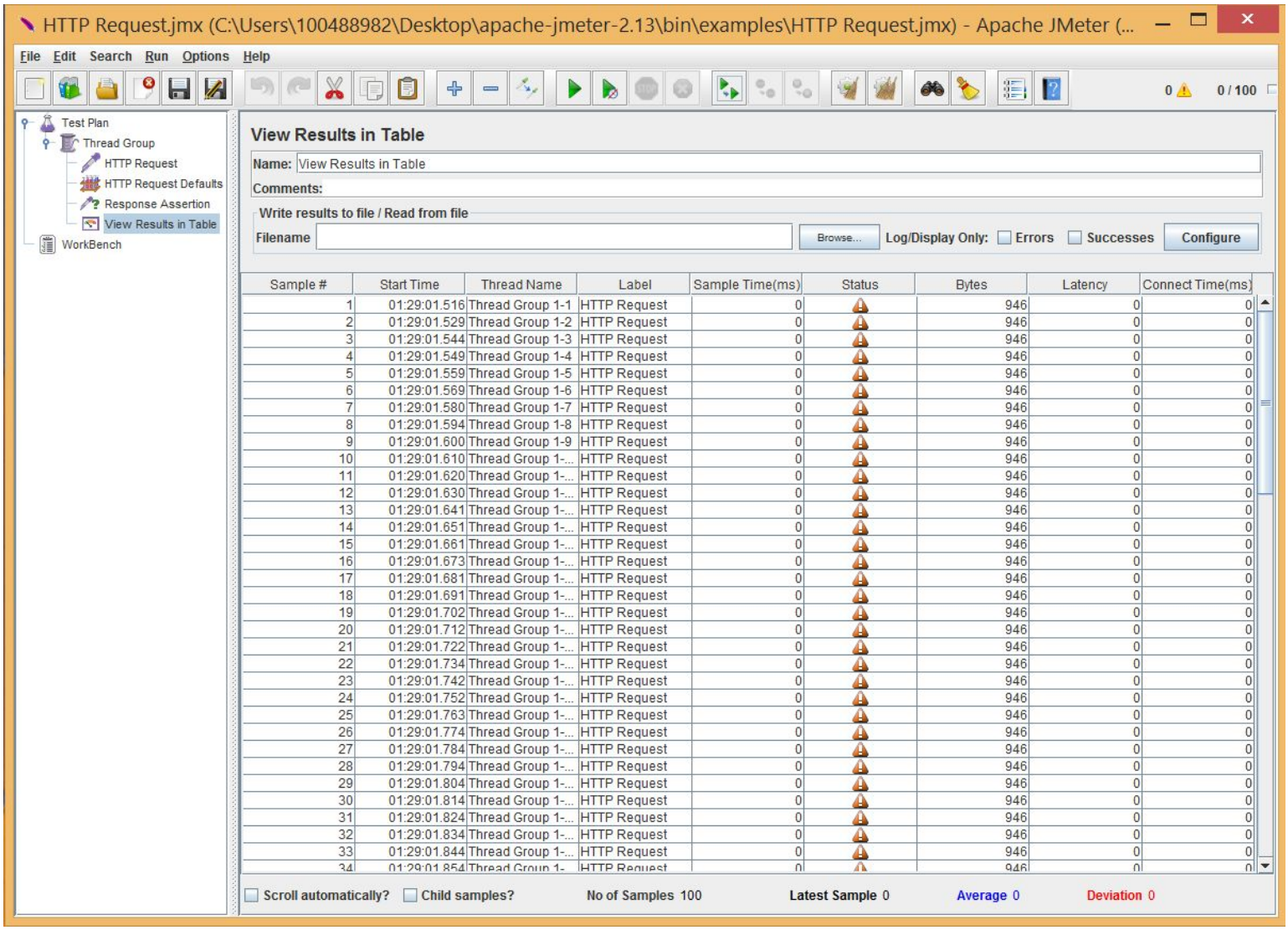
Web App usage Data



Web App using in one hour

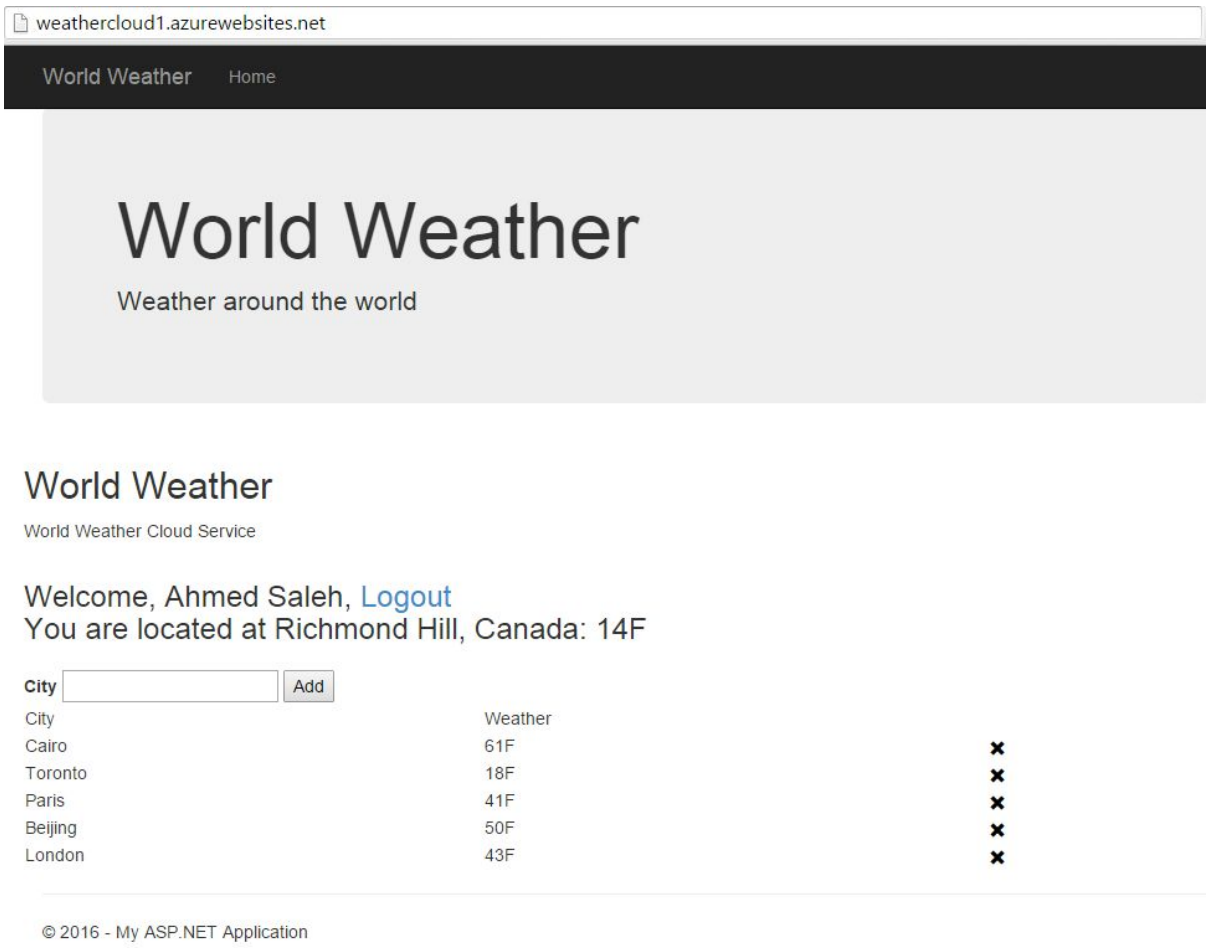


Web App Metrics in one hour



JMeter Test of main Page with 100 threads, and Response Assertion code of 200.

Screen Shots:



References:

[1] M.Sukesh, “WebForms vs. MVC,” - CodeProject. [Online]. Available at: http://www.codeproject.com/articles/528117/webforms-vs-mvc. [Accessed: 11-Feb-2016].

[2] “About This Book,” *JavaScript for Sheridan Students*. [Online]. Available at: http://javascript.sheridanc.on.ca/. [Accessed: 11-Feb-2016].

[3] “4: Autoscaling and Microsoft Azure,” *4: Autoscaling and Microsoft Azure*. [Online]. Available at: https://msdn.microsoft.com/en-us/library/hh680945(v=pandp.50).aspx. [Accessed: 03-Mar-2016].