

McDonalds Geo Location as a Web Service

A WCF implementation

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Introduction

The McDonalds Geo Location as a Web Service has been realized using the Windows Communication Foundation (WCF) version .NET 4.5.

Path to Create a WCF project:

1. Open Visual Studio
2. Click File
3. Click New
4. Click Project
5. Select WCF Service Application from list of available projects for Visual C#
6. Give Name for Project Below

This is how you create the WCF project.

In the Solution Explorer in the right hand side of Visual Studio you will see the files generated for the project.

Technologies

Technologies

The McDonalds data was downloaded from the internet as a csv and then bulk loaded into a MySQL database. The Service queries the data base and then sends out the data in the form of a customized JSON.

Newtonsoft Json.NET

JSON.Net is used to parse the JSON String. It can be achieved by using the JObject notation or by creating an JArray which contains individual sections of the JSON string.

```
using (WebClient wc = new WebClient())
{
    string json = wc.DownloadString(apiCall);
    var jArray = JArray.Parse(json);
}
```

OR it can be done in the following manner :

```
JObject obj = JObject.Parse(json);
while (temp < count)
{
    category = new Category();
    category.categoryID = (string)obj["categories"]["category"][temp]["id"];
    category.categoryName = (string)obj["categories"]["category"][temp]["name"];
    temp++;
}
```

Usage of Web Service

Search for McDonalds on basis of Zip and State

```
public string GetMcDwithZipandState(string parameter)
```

Input Parameters :

parameter : It contains the user query to search SQL data on the particular zip and State .

This Web Service call will return the searched McDonalds instances in the customized JSON format.

Search for McDonalds on basis of City

```
public string GetMcDwithCity(string parameter)
```

Input Parameters :

phrase : It contains the user query to search McDonalds data on the particular city name.

This Web Service call will return the searched McDonalds instances in the customized JSON format.

Class Structure

IService1.cs

Contains the OperationContracts i.e. the definition of the possible set of operations that can be performed using this web service.

Service1.svc.cs

Contains the implementations of the OperationContracts i.e. the implementations of the possible set of operations that can be performed using this web service.

McDonaldsInstance.cs

Contains the singular representation of a McDonalds data in Object Format

MutipleMcDInstance.cs

Contains the representation of multiple McDonalds data instances in Object Format