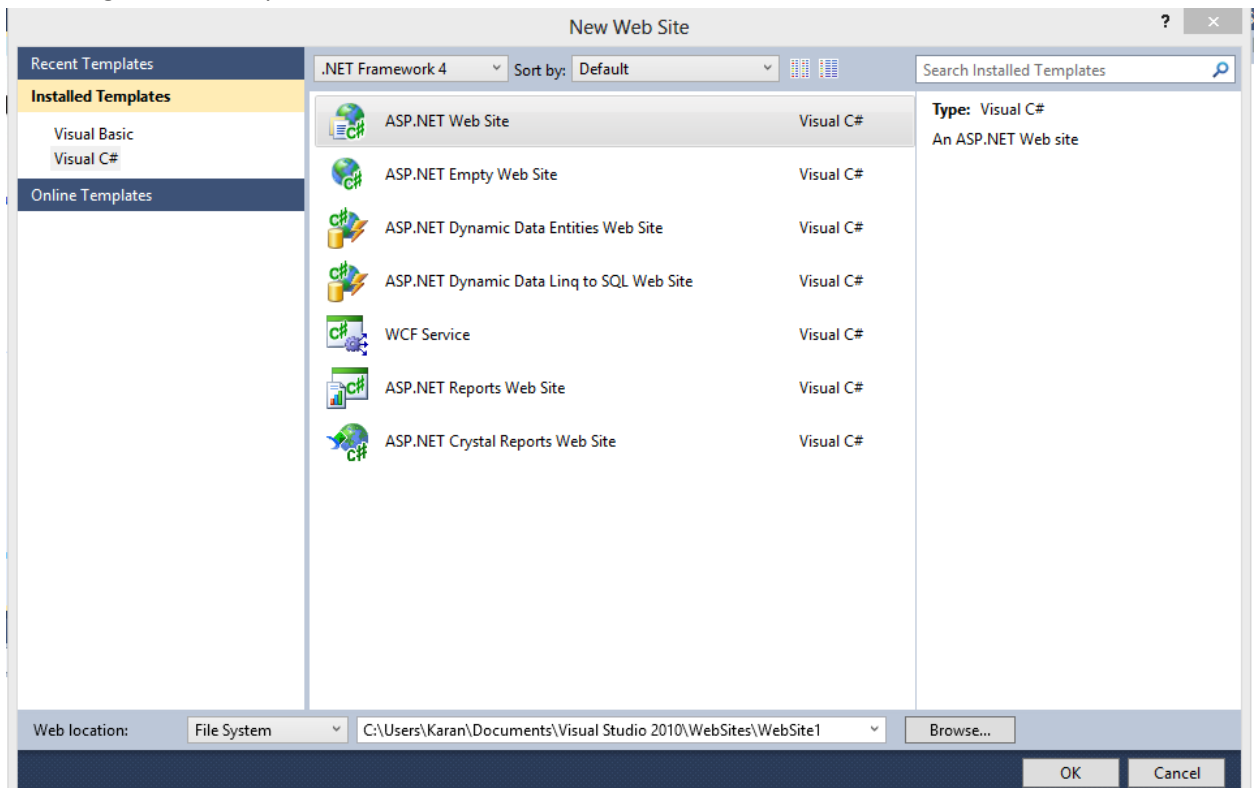# Cheat Sheet for Creating and Testing WCF Service

-Karan Moodbidri
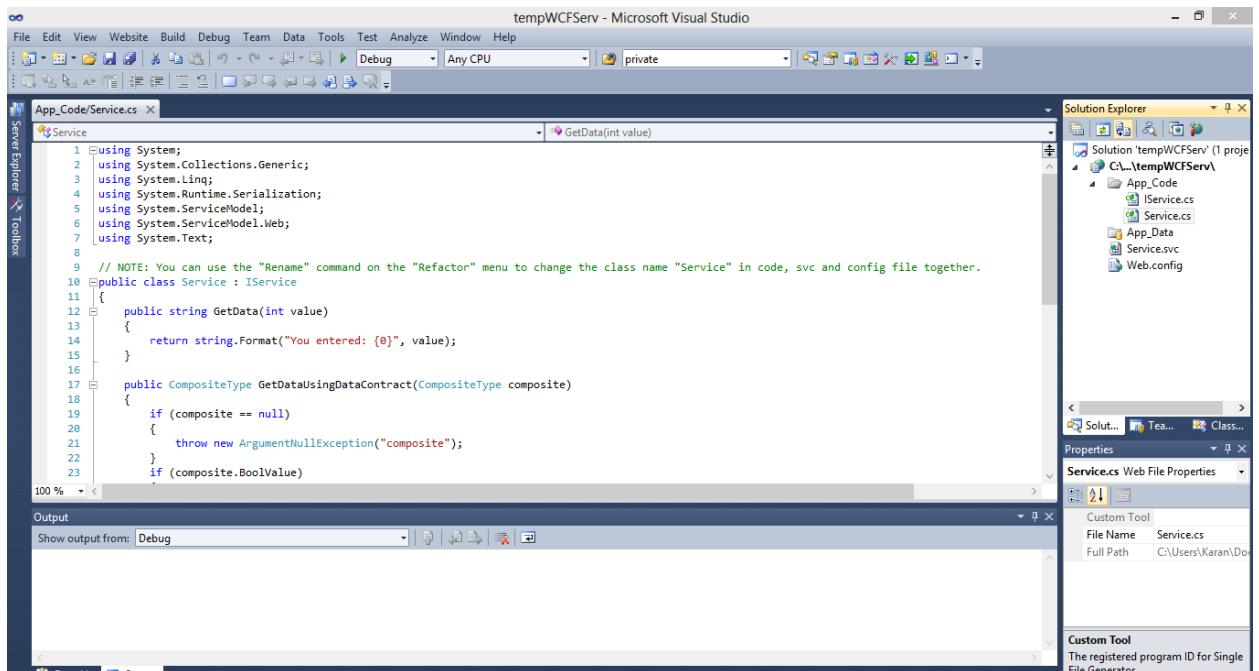
How to create a Project for WCF Service :

- Open Visual Studio / Visual Studio Express Web Developer
- Go to File (On the top Left of the screen)
- Click On New
- Select Web Site
- You will get a List of Options

- Write down the name for the project
- Select WCF Service as the Option
- You can select the Target Framework as 4 or 4.5.

Creating the WCF Service:

After following the previous steps . The project will open.

This is how your screen should look like.
If the solution explorer does not exist when the project starts up follow the following steps :

- Go click on View
- Select Solution Explorer from the drop down

After this , I will explain what does the files in the solution explorer mean.

Implementation of the Service :

The App code folder contains two .cs files by default i.e. IService.cs and Service.cs .
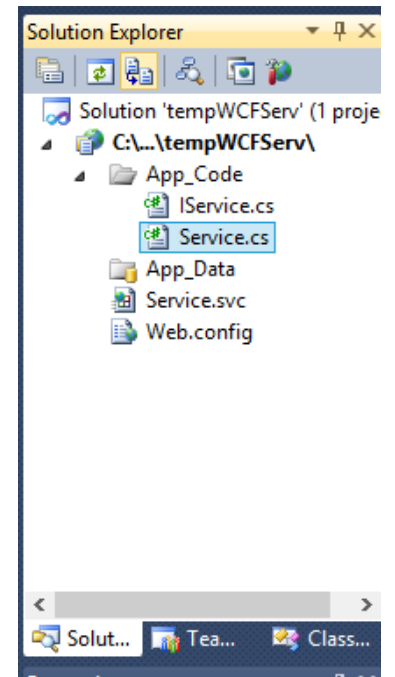
IService.cs :

The IService.cs is the Interface for the web service i.e. All the function that are listed under the IService.cs file are the possible set of operations that the web service can offer. These are written under the[Operation Contract] header. The Operation Contract header means that this web service will provide this operation to anyone who references the web service.

Service.cs :

The Service .cs file is where the implementation of these operations reside. There will be times you will need helper functions to supplement your operation. You can keep the helper functions private . You will need to keep your Operation implementations public.
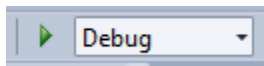
App_Data Folder :

If there are any external sources of data that your web service requires like a CSV file or a Compact SQL Database they will go in your App_Data folder.

Once you decide which operations you want to provide and get done with their implementations. You have created your first WCF Service !!

To Run the file just go to the Service.cs file and run it by clicking on the green play button or press F5.

The green button looks like this

You will redirected to a web page which will tell you how to run the service and where the WSDL resides.
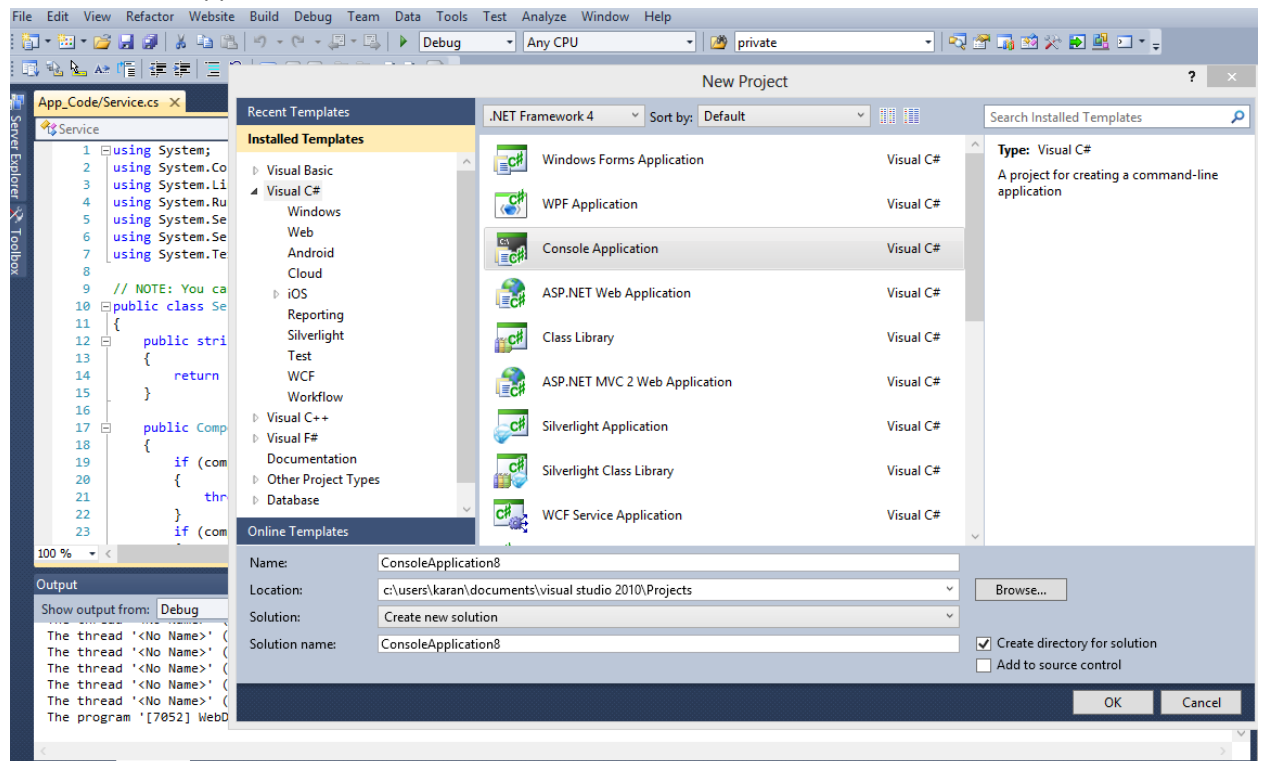
Opening a already created Web Service:

Follow the steps :

- Click on File
- Click on Open
- Select Web site from the list of options

Once this is done . Go to the Service.cs file and run it using F5.

To check whether your service works :

- Go to File
- Click on New
- Click on Project
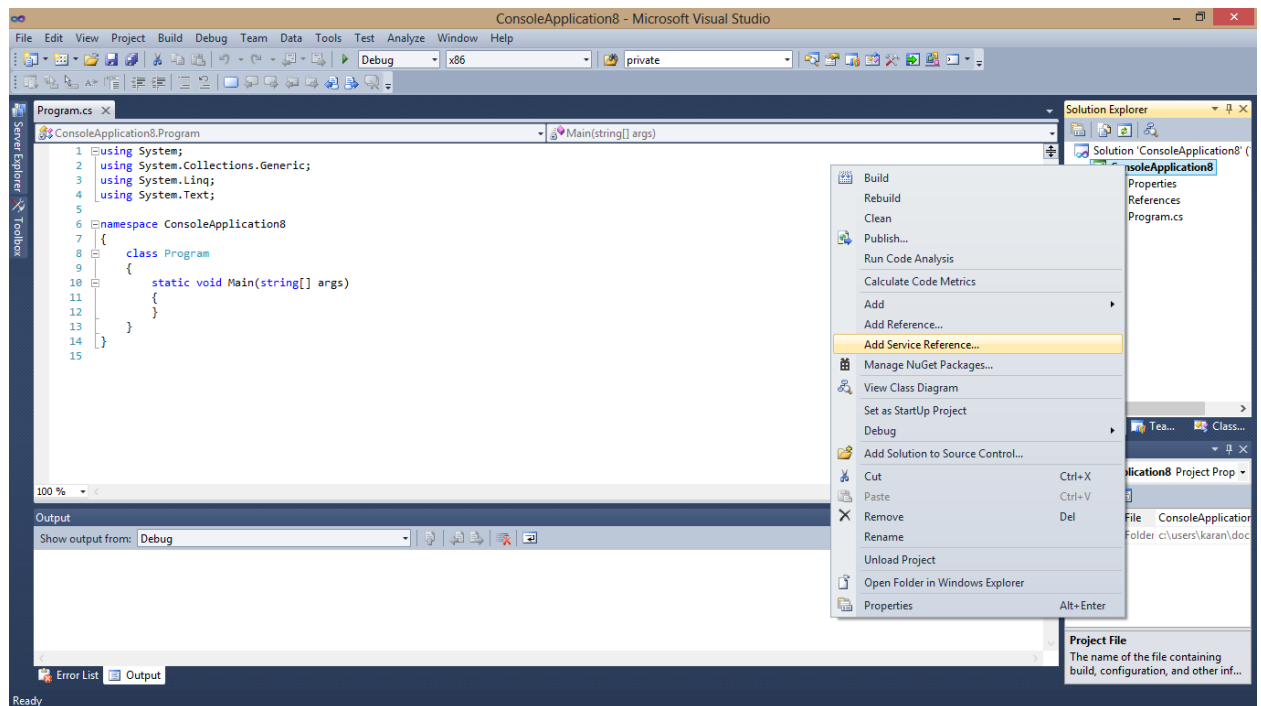- Select Console Application from the List

The you will have the project open.

Now you will need to add the Service reference to your web service. You will need to open two instances of Visual Studio to make Sure you have your actual WCF Service project running in the background and so that you can use the service and so that you refer to this service using the project you are now creating.

Steps to add a Service Reference :
- Right click on Project name in Solution Explorer.
- Click on Add Service Reference
- Add the link to the WSDL in the Address bar
- Click on Go
- Visual Studio will discover the service.
- Rename the Service Reference to the name you want .
- The Service Reference has been Created.

  The next screen shots explain the same visually.

You will get the link to the WSDL when you run the WCF . The url looks like this

You have created a service.

To test this service, you will need to create a client and use it to call the service. You can do this using the svcutil.exe tool from the command line with the following syntax:
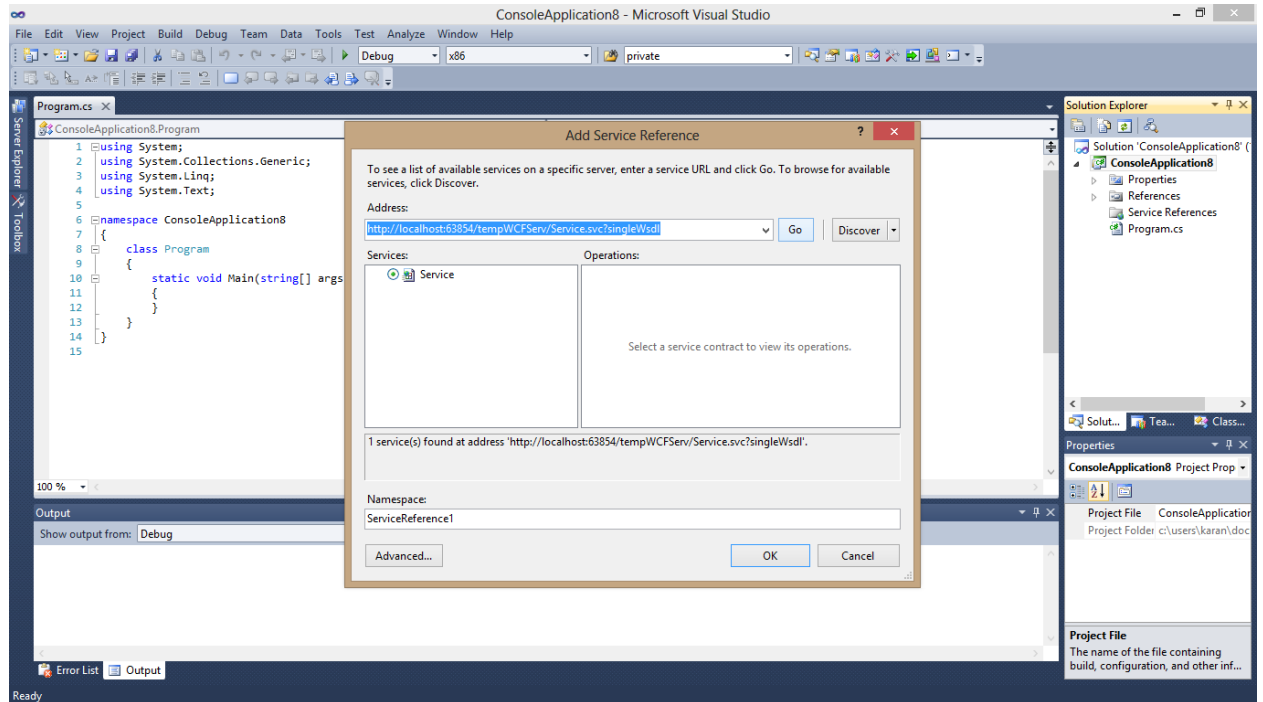
```
svcutil.exe http://localhost:63854/tempWCFServ/Service.svc?wsdl
```

You can also access the service description as a single file:

```
http://localhost:63854/tempWCFServ/Service.svc?singleWsdl
```

This will generate a configuration file and a code file that contains the client class. Add the two files to your client application and use the generated client class to call the Service. For example:

Then you will add this link to the address bar and press go . Visual studio will discover the service. the screen will look like this.

Rename the service to what you want and you have created your first service reference.

To use the Service reference in your program use the following syntax :

```
ServiceReference1.ServiceClient sc = new ServiceReference1.ServiceClient();
```

then you can use 'sc' to call the operations in your web service by providing the right output. Print them out on the Console and check if what you are getting is what you wanted.