

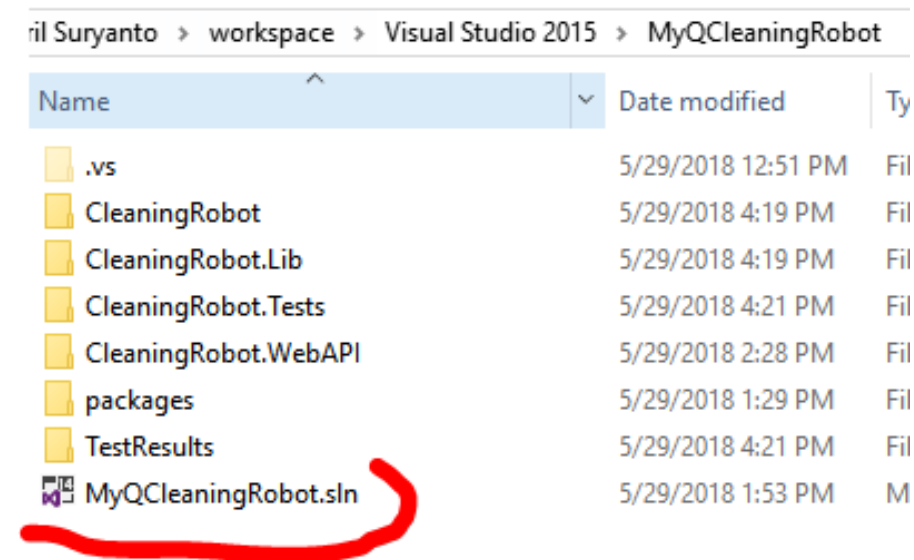
## MyQ Cleaning Robot Task

### Instruction:

I develop this console app using Visual Studio 2015 and framework 4.5.2.

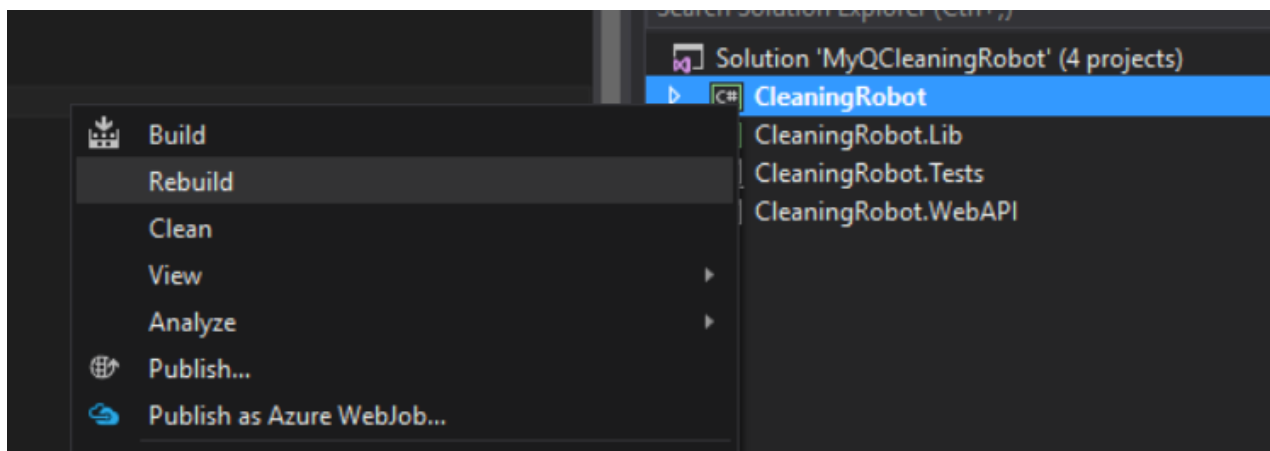
You can get this project in my Git repository. My git repository link of this app is <https://github.com/syaprilahshar/CleaningRobot>

Open the solution (named MyQCleaningRobot.sln) located in the folder root:



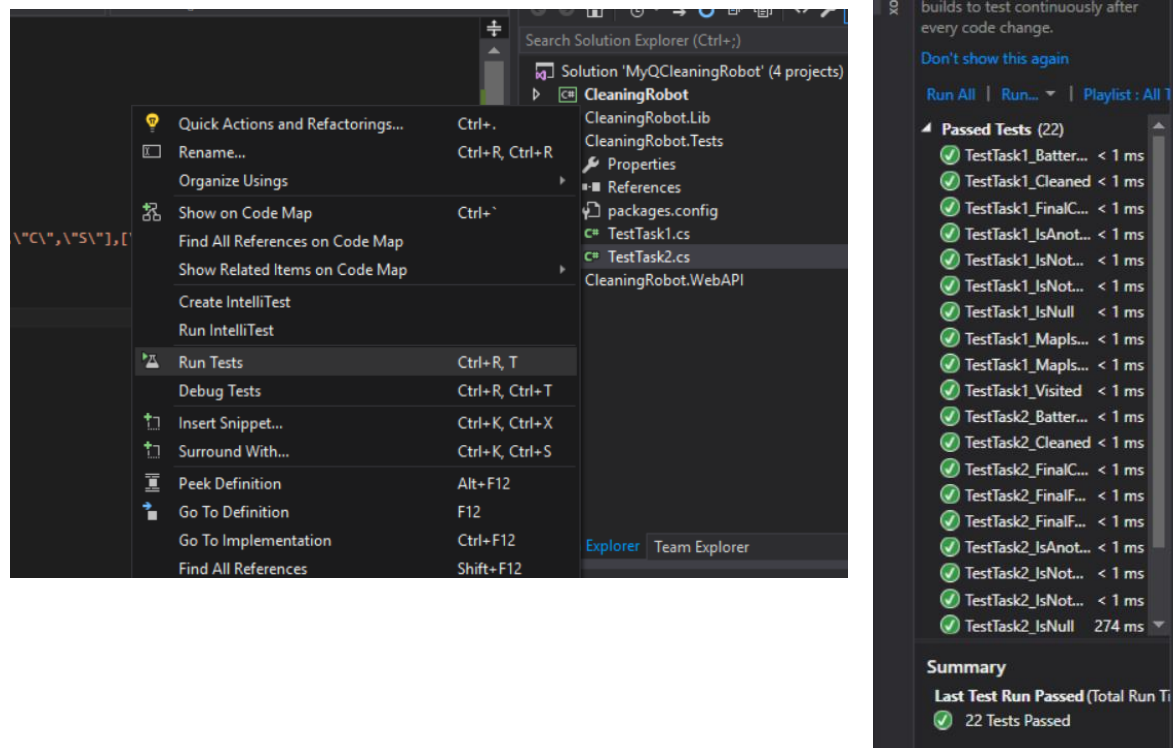
ril Suryanto > workspace > Visual Studio 2015 > MyQCleaningRobot		
Name	Date modified	Type
.vs	5/29/2018 12:51 PM	File
CleaningRobot	5/29/2018 4:19 PM	File
CleaningRobot.Lib	5/29/2018 4:19 PM	File
CleaningRobot.Tests	5/29/2018 4:21 PM	File
CleaningRobot.WebAPI	5/29/2018 2:28 PM	File
packages	5/29/2018 1:29 PM	File
TestResults	5/29/2018 4:21 PM	File
MyQCleaningRobot.sln	5/29/2018 1:53 PM	File

Rebuild the solution in Visual Studio 2015 to update all packages

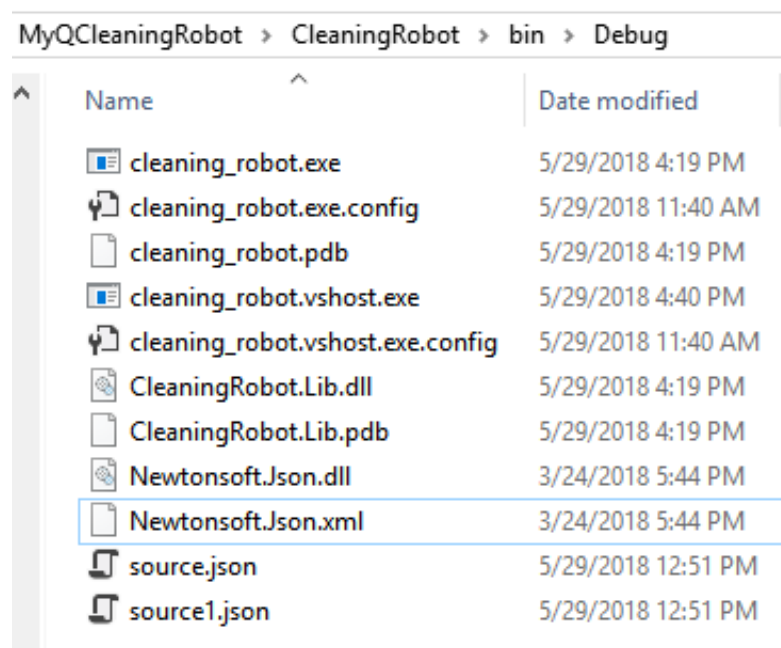


Syapril Ahshar Suryanto

Execute the unit test to see how I test my code and you can found the result at the left of your screen



Open the command line to execute the app in the folder `~\CleaningRobot\bin\Debug`



Syapril Ahshar Suryanto

And execute the following line :

**cleaning\_robot source.json result.json**

```
Command Prompt
C:\Users\syapr\workspace\Visual Studio 2015\MyQCleaningRobot\CleaningRobot\bin\Debug>cleaning_robot source.json result.json
Initialize request...
Start engine...
RUN!

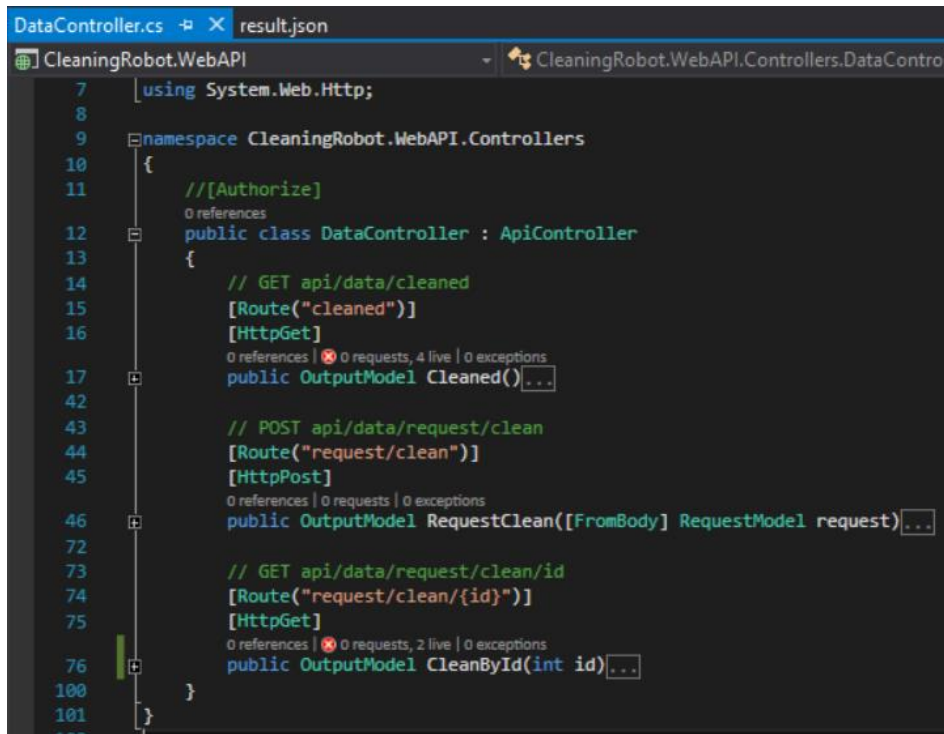
.
..
...
Robot is running...
.
..
...
Generating result file
Stop Engine...
Done!
Note: you can found the result file in the same folder/path with this robot.
Thank you!

C:\Users\syapr\workspace\Visual Studio 2015\MyQCleaningRobot\CleaningRobot\bin\Debug>
```

The result file result.json you can found in the same folder/path of the app, and the result file should be like this:

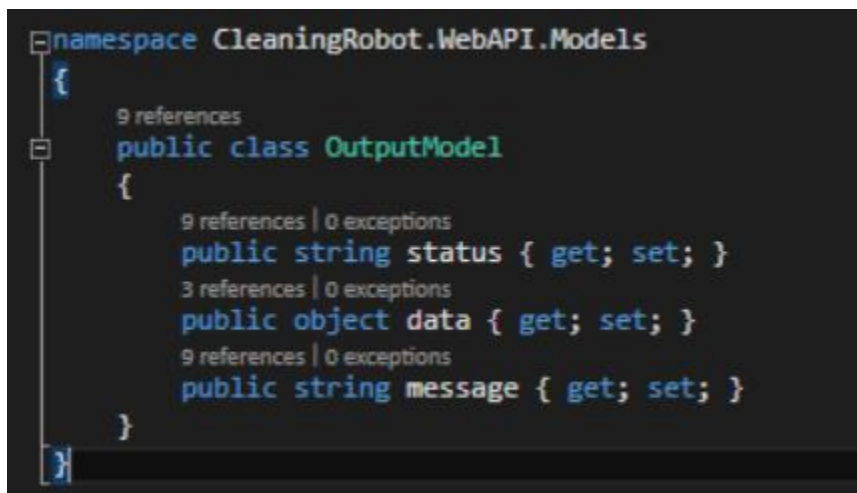
```
result.json
Schema: <No Schema Selected>
1  {
2    "visited": [
3      {
4        "X": 1,
5        "Y": 0
6      },
7      {
8        "X": 2,
9        "Y": 0
10     },
11     {
12       "X": 3,
13       "Y": 0
14     }
15   ],
16   "cleaned": [
17     {
18       "X": 1,
19       "Y": 0
20     },
21     {
22       "X": 2,
23       "Y": 0
24     }
25   ],
26   "final": {
27     "X": 2,
28     "Y": 0,
29     "facing": "E"
30   },
31   "battery": 54
32 }
```

I also add web API project using NET Core, I add one controller and add some method to show you how I develop rest API using following return model:



```
7 using System.Web.Http;
8
9 namespace CleaningRobot.WebAPI.Controllers
10 {
11     [Authorize]
12     public class DataController : ApiController
13     {
14         // GET api/data/cleaned
15         [Route("cleaned")]
16         [HttpGet]
17         public OutputModel Cleaned()
18         {
19             // ...
20         }
21
22         // POST api/data/request/clean
23         [Route("request/clean")]
24         [HttpPost]
25         public OutputModel RequestClean([FromBody] RequestModel request)
26         {
27             // ...
28         }
29
30         // GET api/data/request/clean/{id}
31         [Route("request/clean/{id}")]
32         [HttpGet]
33         public OutputModel CleanById(int id)
34         {
35             // ...
36         }
37     }
38 }
```

The output model contains status, data, and message. The status is string, why? Because I think it can be success, error, failed, verify, or others flag.



```
namespace CleaningRobot.WebAPI.Models
{
    public class OutputModel
    {
        public string status { get; set; }
        public object data { get; set; }
        public string message { get; set; }
    }
}
```