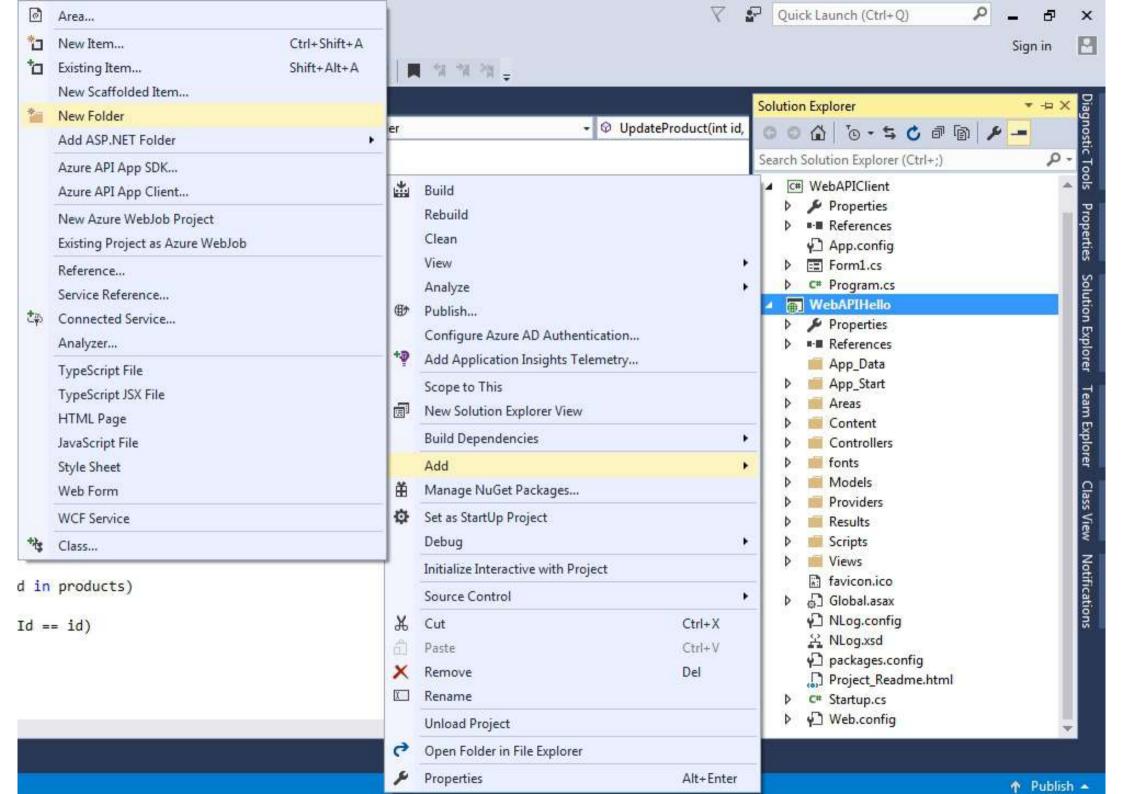
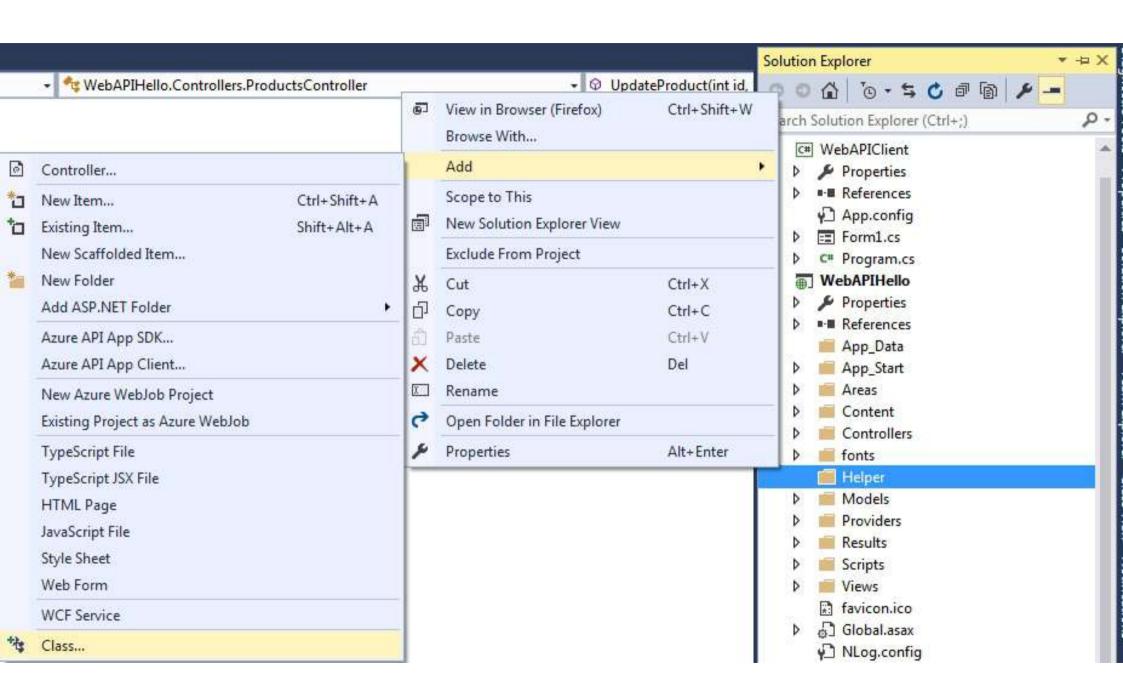
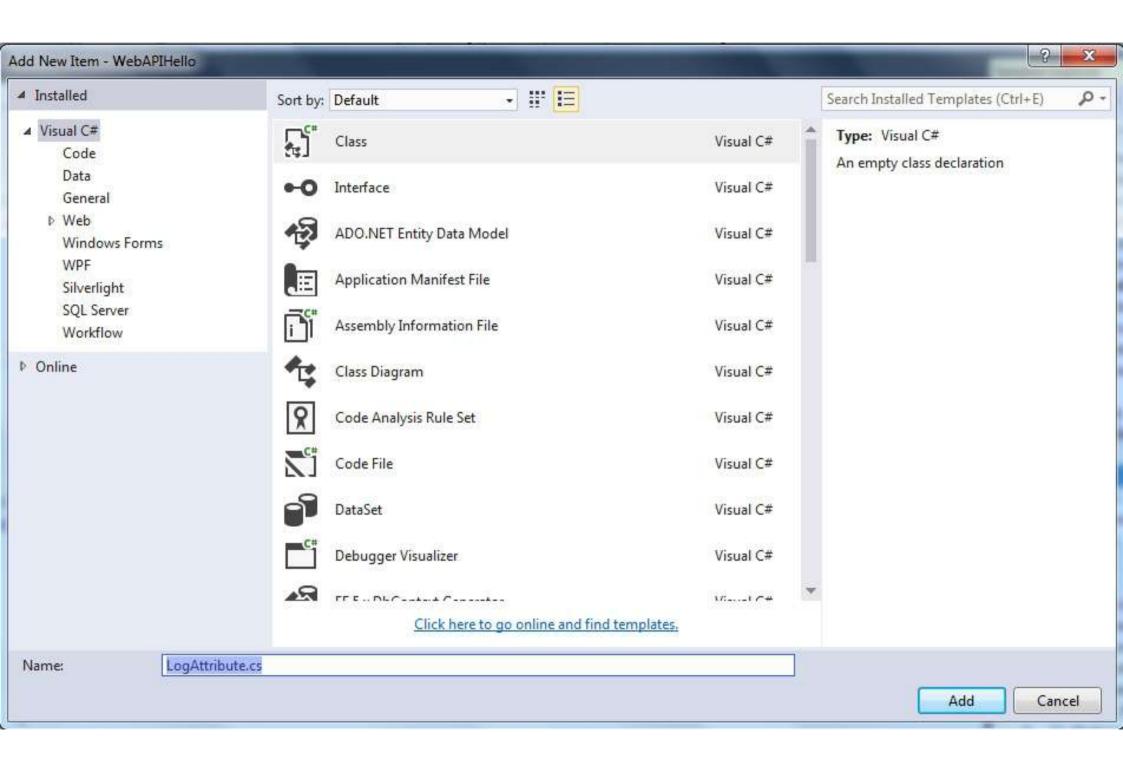
Web API Action Filters







```
ProductsController.cs
LogAttribute.cs* ₽ ×

→ MebAPIHello.Helper.LogAttribute

MebAPIHello

    ◆ OnActionExecuting(HttpActionContext a

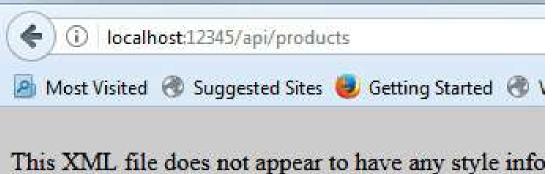
            using System.Web;
      4
             using System.Web.Http.Controllers;
      5
            using System.Web.Http.Filters;
            using System.Diagnostics;
      7
      8
           Inamespace WebAPIHello.Helper
      9
                 public class LogAttribute : ActionFilterAttribute
     10
     11
    12
                     public LogAttribute()
     13
     14
     15
                     public override void OnActionExecuting(HttpActionContext actionContext)
     16
                         Trace.WriteLine(string.Format("Action Method {0} executing at {1}",
     17
                                           actionContext.ActionDescriptor.ActionName, DateTime.Now.ToShortDateString()));
     18
     19
                     public override void OnActionExecuted(HttpActionExecutedContext actionExecutedContext)
     20
     21
                         Trace.WriteLine(string.Format("Action Method {0} executed at {1}",
     22
                                           actionExecutedContext.ActionContext.ActionDescriptor.ActionName,
     23
     24
                                           DateTime.Now.ToShortDateString()) );
     25
     26
     27
```

```
using System.Collections.Generic;
using System.Ling;
using System.Net;
using System.Net.Http:
using System.Web.Http;
using WebAPIHello.Helper:
using WebAPIHello.Models;
namespace WebAPIHello.Controllers
{
    public class ProductsController : ApiController
        static List<Product> products = new List<Product>
            new Product() { ProductId=1, ProductName="Monitor",
                                                                     ProductPrice=10000 },
            new Product() { ProductId=2, ProductName="Keyboard",
                                                                     ProductPrice=1500 },
            new Product() { ProductId=3, ProductName="Mouse",
                                                                     ProductPrice=400 }
        };
        public IEnumerable<Product> GetProducts()
```

To apply this filter to all Web API controllers, add an instance of the filter to the HttpConfiguration. Filters collection during configuration:

```
public static class WebApiConfig
{
    public static void Register(HttpConfiguration config)
    {
        config.Filters.Add(new LogAttribute());

        // ...
    }
}
```



```
-<ArrayOfProduct>
  -<Pre>-<Pre>roduct>
      <Pre><Pre>oductId>1</Pre>
      <Pre><Pre>oductName>Monitor</Pre>/ProductName>
      <Pre><Pre>roductPrice>10000</Pre>
    </Product>
  -<Pre>-<Pre>roduct>
      <Pre><Pre>oductId>2</Pre>/ProductId>
      <Pre><Pre>roductName>Keyboard</Pre>ductName>
      <Pre><Pre>roductPrice>1500</Pre>
    </Product>
  -<Pre>-<Pre>roduct>
      <Pre><Pre>roductId>3</Pre>
      <Pre><Pre>ductName>Mouse</Pre>ductName>
      <ProductPrice>400</ProductPrice>
    </Product>
 </ArrayOfProduct>
```





localhost:12345/api/products?id=2





Most Visited Suggested Sites Getting Started





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-<Pre>-<Pre>coduct>

<Pre><Pre>roductId>2</Pre>

<Pre><Pre>ductName>Keyboard</Pre>ductName>

<Pre><Pre>roductPrice>1500</Pre>ductPrice>

</Product>





localhost:12345/api/products?id=3



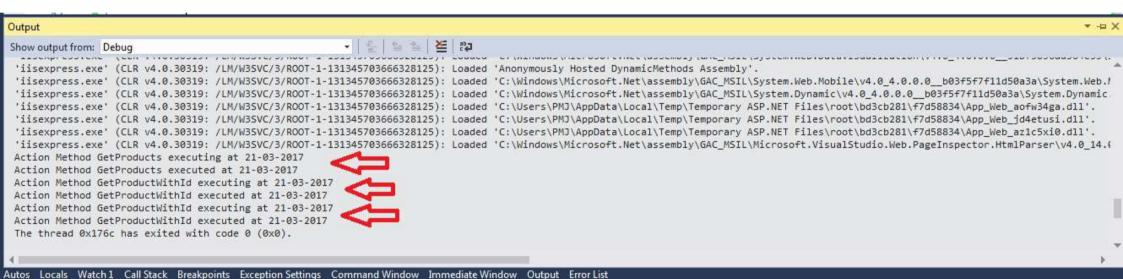


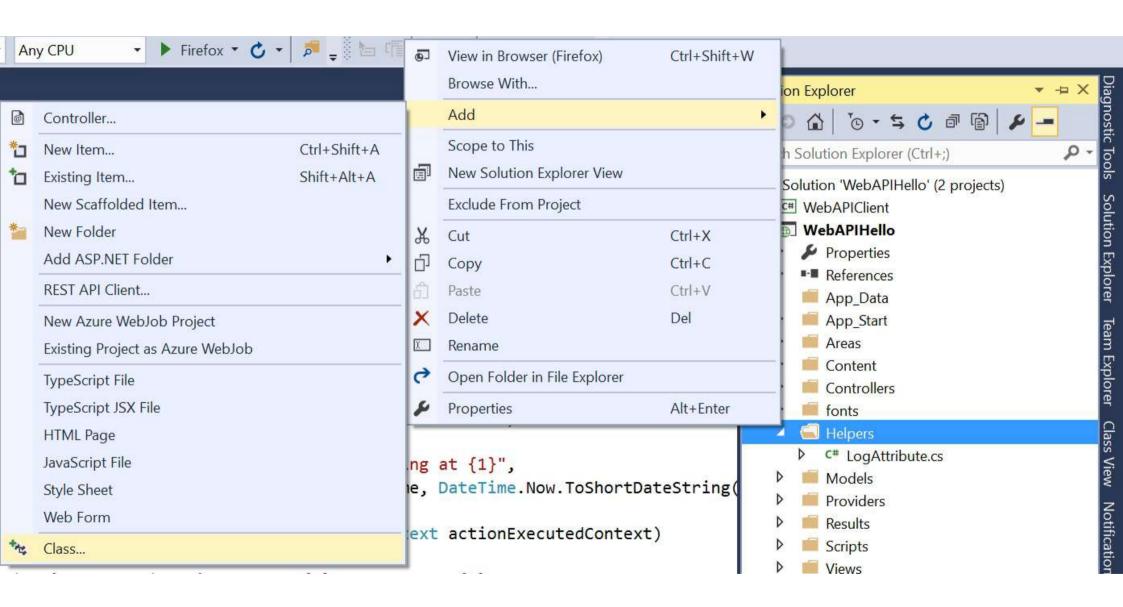
Most Visited 🖤 Suggested Sites 😻 Getting Started

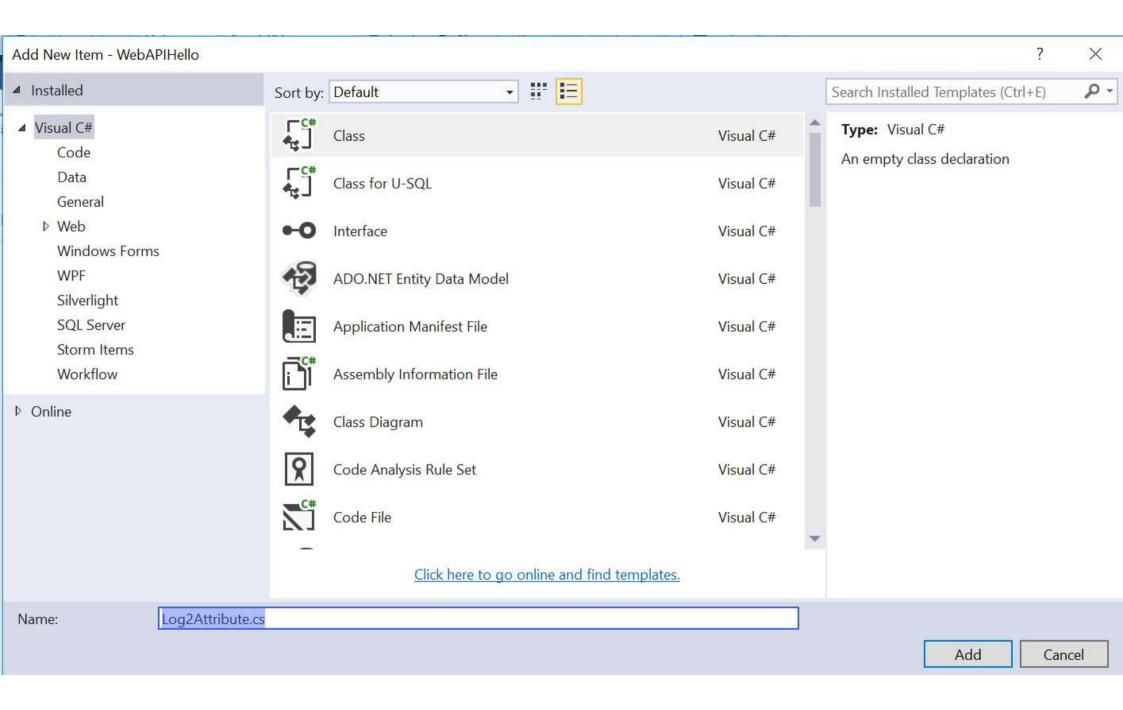


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- -<Pre>-<Pre>roduct>
 - <Pre><Pre>oductId>3</Pre>ductId>
 - <Pre><Pre>ductName>Mouse</Pre>ductName>
 - <Pre><Pre>roductPrice>400</Pre>ductPrice>
 - </Product>







```
namespace WebAPIHello.Helpers
     public class Log2Attribute: Attribute, IActionFilter
         public Log2Attribute() { }
         public Task<httpResponseMessage> ExecuteActionFilterAsync( HttpActionContext actionContext,
                                                                      CancellationToken cancellationToken,
                                                                      Func<Task<HttpResponseMessage>> continuation)
         {
             Trace.WriteLine(string.Format("Action Method {0} executing at {1}",
                             actionContext.ActionDescriptor.ActionName, DateTime.Now.ToShortDateString()));
             var result = continuation();
             result.Wait();
             Trace.WriteLine(string.Format("Action Method {0} executed at {1}",
                             actionContext.ActionDescriptor.ActionName, DateTime.Now.ToShortDateString()));
             return result;
         public bool AllowMultiple
             get { return true; }
```

```
using System.Net;
using System.Net.Http;
using System.Web.Http;
using WebAPIHello.Helpers;
using WebAPIHello.Models;
namespace WebAPIHello.Controllers
     Log2
     public class ProductsController : ApiController
         static List<Product> products = new List<Product>
             new Product() { ProductId=1, ProductName="Monitor",
                                                                     ProductPrice=10000 },
             new Product() { ProductId=2, ProductName="Keyboard",
                                                                     ProductPrice=1500 },
             new Product() { ProductId=3, ProductName="Mouse",
                                                                     ProductPrice=400 }
         };
```

This XML file does not appear to have any style info

```
-<ArrayOfProduct>
 -<Product>
     <ProductId>1</ProductId>
     <Pre><Pre>ductName>Monitor</Pre>
     <ProductPrice>10000</ProductPrice>
   </Product>
 -<Product>
     <Pre><Pre>ductId>2</Pre>
     <ProductName>Keyboard</ProductName>
     <ProductPrice>1500</ProductPrice>
   </Product>
 -<Product>
     <Pre><Pre>ductId>3</Pre>
     <Pre><Pre>oductName>Mouse</Pre>
     <ProductPrice>400</ProductPrice>
   </Product>
 </ArrayOfProduct>
```





(i) localhost:12345/api/products?id=3

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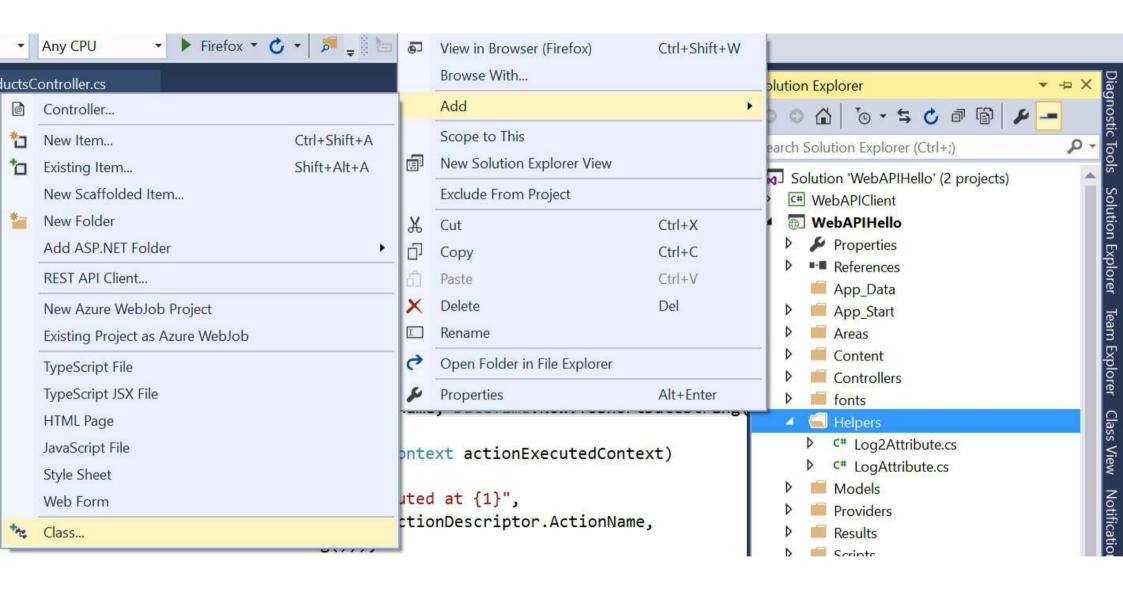
<Product> <Pre><Pre>oductId>3</Pre>ductId> <Pre><Pre>ductName>Mouse</Pre>ductName> <Pre><Pre>ductPrice>400</Pre>ductPrice> </Product>

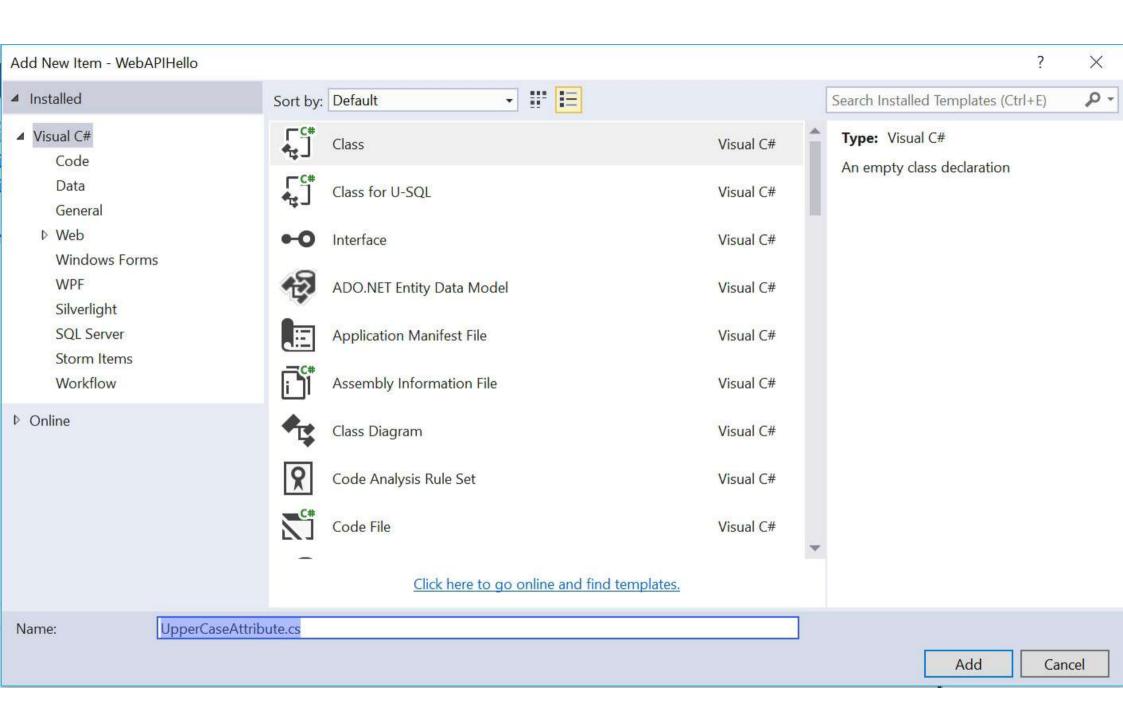
This XML file does not appear to have any style inform

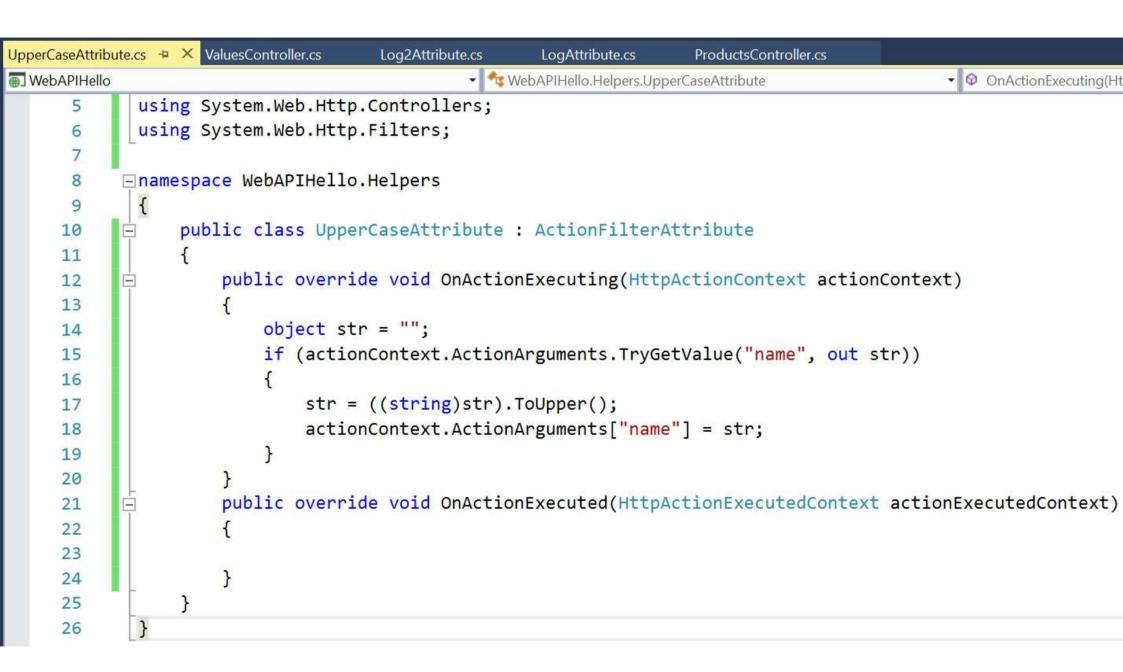
```
-<ArrayOfProduct>
  -<Product>
     <ProductId>1</ProductId>
      <Pre><Pre>oductName>Monitor</Pre>
      <ProductPrice>10000</ProductPrice>
   </Product>
  -<Product>
     <Pre><Pre>oductId>2</Pre>
     <ProductName>Keyboard</ProductName>
      <ProductPrice>1500</ProductPrice>
   </Product>
  -<Product>
     <ProductId>3</ProductId>
     <Pre><Pre>oductName>Mouse</Pre>ductName>
     <ProductPrice>400</ProductPrice>
   </Product>
 </ArrayOfProduct>
```

Output

```
Exception thrown: 'Microsoft.CSharp.RuntimeBinder.RuntimeBinderException' in Microsoft.CSharp.dll
Exception thrown: 'Microsoft.CSharp.RuntimeBinder.RuntimeBinderException' in Microsoft.CSharp.dll
'iisexpress.exe' (CLR v4.0.30319: /LM/W3SVC/3/ROOT-1-131345879359045865): Loaded 'C:\Users\LENOVO\/
'iisexpress.exe' (CLR v4.0.30319: /LM/W3SVC/3/ROOT-1-131345879359045865): Loaded 'C:\Users\LENOVO\/
'iisexpress.exe' (CLR v4.0.30319: /LM/W3SVC/3/ROOT-1-131345879359045865): Loaded 'C:\Users\LENOVO\/
Exception thrown: 'Microsoft.CSharp.RuntimeBinder.RuntimeBinderException' in Microsoft.CSharp.dll
Exception thrown: 'Microsoft.CSharp.RuntimeBinder.RuntimeBinderException' in Microsoft.CSharp.dll
'iisexpress.exe' (CLR v4.0.30319: /LM/W3SVC/3/ROOT-1-131345879359045865): Loaded 'C:\WINDOWS\Microsoft.CSharp.dll
'iisexpress.exe' (CLR v4.0.30319: /LM/W3SVC/3/ROOT-1-131345879359045865): Loaded 'C:\WINDOWS\Microsoft.CSharp.dll
'Action Method GetProducts executed at 21-03-2017
Action Method GetProducts executed at 21-03-2017
```







```
public Product GetProductWithName(string name)
    switch(name.ToUpper())
        case "MONITOR": return products[0];
        case "KEYBOARD": return products[1];
        case "MOUSE": return products[2];
        default: return new Product()
                            ProductId = 0,
                            ProductName = "Product does'nt exist!",
                            ProductPrice = 0
                        };
```

```
[UpperCase]
public Product GetProductWithName(string name)
    switch (name)
        case "MONITOR": return products[0];
        case "KEYBOARD": return products[1];
        case "MOUSE": return products[2];
        default:
            return new Product()
                ProductId = 0,
                ProductName = "Product does'nt exist!",
                ProductPrice = 0
            };
```





localhost:12345/api/products?name=monitor

This XML file does not appear to have any style infor

```
-<Product>
<ProductId>1</ProductId>
<ProductName>Monitor</ProductName>
<ProductPrice>10000</ProductPrice>
</Product>
```





(i) localhost:12345/api/products?name=kEYbOARD

This XML file does not appear to have any style informati

<Product> <Pre><Pre>oductId>2</Pre> <Pre><Pre>ductName>Keyboard</Pre>ductName> <Pre><Pre>ductPrice>1500</Pre>ductPrice> </Product>

Model Validation in Web API

```
HttpPost
public void AddProductLike(Product prod)
    Product p = new Product();
    if (prod != null)
        p.ProductId = prod.ProductId;
        p.ProductName = prod.ProductName;
        p.ProductPrice = prod.ProductPrice;
        products.Add(p);
```



localhost:12345/api/products

This XML file does not appear to have any style infor.

```
-<ArrayOfProduct>
  -<Product>
      <ProductId>1</ProductId>
      <Pre><Pre>oductName>Monitor</Pre>
      <ProductPrice>10000</ProductPrice>
   </Product>
  -<Product>
      <ProductId>2</ProductId>
     <Pre><Pre>ductName>Keyboard</Pre>ductName>
      <ProductPrice>1500</ProductPrice>
   </Product>
  -< Product>
      <Pre><Pre>oductId>3</Pre>
      <Pre><Pre>oductName>Mouse</Pre>ductName>
     <ProductPrice>400</ProductPrice>
   </Product>
 </ArrayOfProduct>
```

POST

http://localhost:12345/api/products

Request Headers:

Host: localhost:12345

User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:52.0) Gecko/20100101 Firefox/52.0

Accept: application/json

Content-Type: application/json

Accept-Language: en-US,en;q=0.5

Accept-Encoding: gzip, deflate

Connection: keep-alive

Upgrade-Insecure-Requests: 1

Cache-Control: max-age=0, no-cache

Request Body:

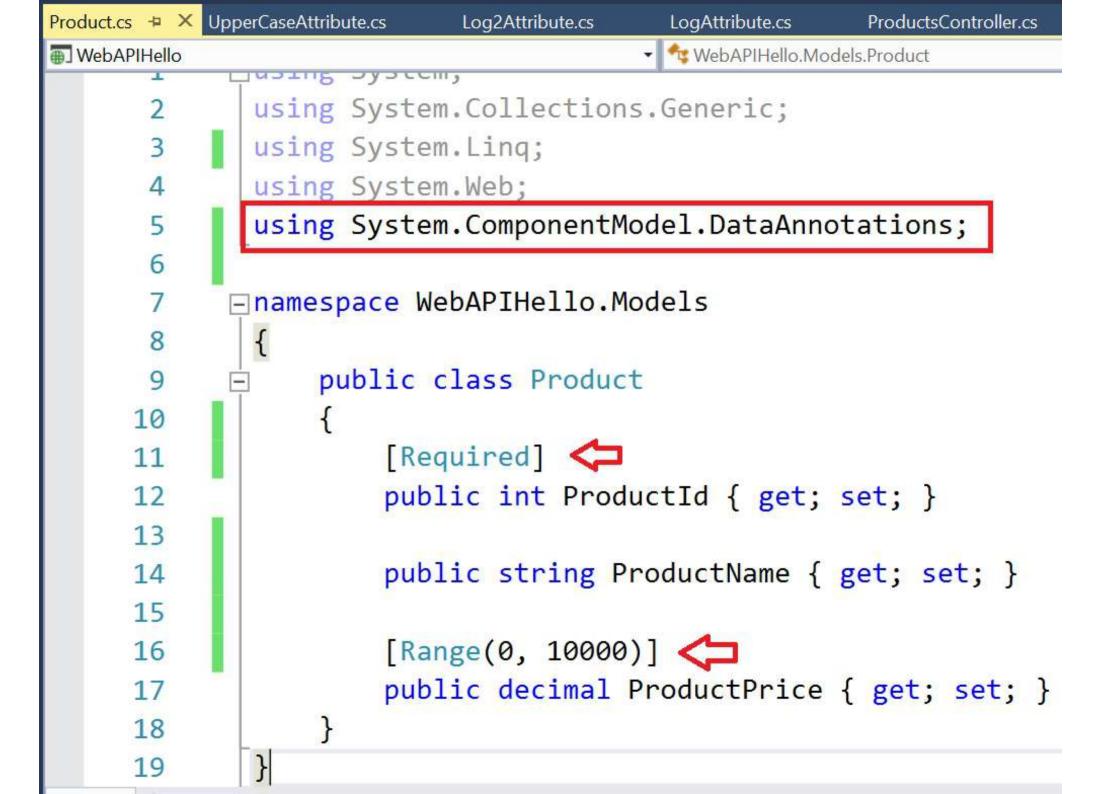
```
{
productname: "printer",
productprice: 6000
```

"ProductId" is missing in the request body ??

Headers Cookies Params Response **Timings** Request URL: http://localhost:12345/api/products Request method: POST Remote address: [::1]:12345 Edit and Resend Raw headers Status code: 204 No Content Version: HTTP/1.1 ₹ Filter headers Response headers (0.353 KB) Cache-Control: "no-cache" Date: "Tue, 21 Mar 2017 18:36:32 GMT" Expires: "-1" Pragma: "no-cache" Server: "Microsoft-IIS/10.0" X-AspNet-Version: "4.0.30319" X-Powered-By: "ASP.NET" X-SourceFiles: "=?UTF-8?B?QzpcVXNlcnNcTEVOT1ZPXERvY3Vt...FdlYkFQSUhlbGxvXGFwaVxwcm9kdWN0cw==?=" Request headers (0.383 KB) Host: "localhost:12345" User-Agent: "Mozilla/5.0 (Windows NT 10.0; WOW64; rv:52.0) Gecko/20100101 Firefox/52.0" Accept: "application/ison" Accept-Language: "en-US,en;q=0.5" Accept-Encoding: "gzip, deflate" Content-Type: "application/json" Connection: "keep-alive" Upgrade-Insecure-Requests: "1" Cache-Control: "max-age=0, no-cache" Content-Length: "46" Dragma: "no-cacho"

This XML file does not appear to have any style info

```
-<ArrayOfProduct>
  -< Product>
     <Pre><Pre>ductId>1</Pre>
     <Pre><Pre>ductName>Monitor</Pre>
     <ProductPrice>10000</ProductPrice>
   </Product>
  -<Product>
     <Pre><Pre>oductId>2</Pre>
     <Pre><Pre>roductName>Keyboard</Pre>
     <ProductPrice>1500</ProductPrice>
   </Product>
  -<Product>
     <ProductId>3</ProductId>
     <Pre><Pre>oductName>Mouse</Pre>
     <ProductPrice>400</ProductPrice>
   </Product>
  - < Product>
     <ProductId>0</ProductId>
     <Pre><Pre>roductName>printer</Pre>
     <ProductPrice>6000</ProductPrice>
   </Product>
 </ArrayOfProduct>
```



```
public class person
    [StringLength(7), Required]
    public string Name { get; set; }
    public string surname { get; set; }
    [Range(0, 99)]
    public Int16 age { get; set; }
    [RegularExpression("^[0-9]*$")]
    public string PhoneNo { get; set; }
    [RegularExpression(@"^([\w\.\-]+)@([\w\-]+)((\.(\w){2,3})+)$")]
    public string Email { get; set; }
```

```
[HttpPost]
public HttpResponseMessage AddProductLike(Product prod)
    Product p = new Product();
    if (ModelState.IsValid)
        p.ProductId = prod.ProductId;
        p.ProductName = prod.ProductName;
        p.ProductPrice = prod.ProductPrice;
        products.Add(p);
        return new HttpResponseMessage(HttpStatusCode.OK);
    else
        return Request.CreateErrorResponse(HttpStatusCode.BadRequest, ModelState);
```

POST

http://localhost:12345/api/products

Request Headers:

Host: localhost:12345

User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:52.0) Gecko/20100101 Firefox/52.0

Accept: application/json

Accept-Language: en-US,en;q=0.5

Accept-Encoding: gzip, deflate

Content-Type: application/json

Connection: keep-alive

Upgrade-Insecure-Requests: 1

Cache-Control: max-age=0, no-cache

Request Body:

```
{
productname: "printer",
productprice: 6000
}
```

Headers Cookies Params Response **Timings** Request URL: http://localhost:12345/api/products Request method: POST Remote address: [::1]:12345 Raw headers Edit and Resend ??? Status code: 0 200 OK Version: HTTP/1.1 Filter headers Response headers (0.363 KB) Cache-Control: "no-cache" Content-Length: "0" Date: "Tue, 21 Mar 2017 18:57:08 GMT" Expires: "-1" Pragma: "no-cache" Server: "Microsoft-IIS/10.0" X-AspNet-Version: "4.0.30319" X-Powered-By: "ASP.NET" X-SourceFiles: "=?UTF-8?B?QzpcVXNlcnNcTEVOT1ZPXERvY3Vt...FdlYkFQSUhlbGxvXGFwaVxwcm9kdWN0cw==?=" Request headers (0.383 KB) Host: "localhost:12345" User-Agent: "Mozilla/5.0 (Windows NT 10.0; WOW64; rv:52.0) Gecko/20100101 Firefox/52.0" Accept: "application/json" Accept-Language: "en-US,en;q=0.5" Accept-Encoding: "gzip, deflate" Content-Type: "application/json" Connection: "keep-alive" Upgrade-Insecure-Requests: "1" Cache-Control: "max-age=0, no-cache" Contant I anath, "AG"

This XML file does not appear to have any style info

```
-<ArrayOfProduct>
  -< Product>
     <ProductId>1</ProductId>
     <Pre><Pre>ductName>Monitor</Pre>ductName>
     <ProductPrice>10000</ProductPrice>
   </Product>
  -<Product>
     <ProductId>2</ProductId>
     <Pre><Pre>roductName>Keyboard</Pre>
     <ProductPrice>1500</ProductPrice>
   </Product>
  -<Product>
     <Pre><Pre>oductId>3</Pre>
     <Pre><Pre>oductName>Mouse</Pre>
     <ProductPrice>400</ProductPrice>
   </Product>
  - < Product>
     <ProductId>0</ProductId> ?????
     <Pre><Pre>roductName>printer</Pre>
     <ProductPrice>6000</ProductPrice>
   </Product>
 </ArrayOfProduct>
```

The JSON formatter assigns a default value of zero to the missing properties.

```
namespace WebAPIHello.Models
    public class Product
                            Nullable
        [Required] 💪
        public(int?)ProductId { get; set; }
        public string ProductName { get; set; }
        [Range(0, 10000)]
        public decimal ProductPrice { get; set; }
```

Send

Cancel

POST

http://localhost:12345/api/products

Request Headers:

Host: localhost:12345

User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:52.0) Gecko/20100101 Firefox/52.0

Accept: application/json

Accept-Language: en-US,en;q=0.5

Accept-Encoding: gzip, deflate

Content-Type: application/json

Connection: keep-alive

Upgrade-Insecure-Requests: 1

Cache-Control: max-age=0, no-cache

Request Body:

{
productname: "printer",
productprice: 6000



ProductId is missing ???

Headers Cookies **Timings** Params Response Request URL: http://localhost:12345/api/products Request method: POST Remote address: [::1]:12345 Raw headers Edit and Resend Status code: 400 Bad Request Version: HTTP/1.1 Filter headers Response headers (0.420 KB) Cache-Control: "no-cache" Content-Length: "106" Content-Type: "application/json; charset=utf-8" Date: "Tue, 21 Mar 2017 19:09:21 GMT" Expires: "-1" Pragma: "no-cache" Server: "Microsoft-IIS/10.0" X-AspNet-Version: "4.0.30319" X-Powered-By: "ASP.NET" X-SourceFiles: "=?UTF-8?B?QzpcVXNlcnNcTEVOT1ZPXERvY3Vt...FdlYkFQSUhlbGxvXGFwaVxwcm9kdWN0cw==?=" Request headers (0.383 KB) Host: "localhost:12345" User-Agent: "Mozilla/5.0 (Windows NT 10.0; WOW64; rv:52.0) Gecko/20100101 Firefox/52.0" Accept: "application/json" Accept-Language: "en-US,en;q=0.5" Accept-Encoding: "gzip, deflate" Content-Type: "application/json" Connection: "keep-alive" Upgrade-Insecure-Requests: "1" Cache-Control: "may-ago-O no-cache"



35011

message: "The request is invalid."

▼ modelState: Object

▼ prod.ProductId: Array

0: "The ProductId field is required."

Cancel

POST

http://localhost:12345/api/products

Request Headers:

Host: localhost:12345
User-Agent: Mozilla/5.0 (Windows NT 10.0; WOW64; rv:52.0) Gecko/20100101 Firefox/52.0
Accept: application/json
Accept-Language: en-US,en;q=0.5
Accept-Encoding: gzip, deflate
Content-Type: application/json
Connection: keep-alive
Upgrade-Insecure-Requests: 1
Cache-Control: max-age=0, no-cache

Request Body:

```
{
productid: 4,
productname: "printer",
productprice: 6000
}
```

Headers Cookies **Timings** Params Response Request URL: http://localhost:12345/api/products Request method: POST Remote address: [::1]:12345 Edit and Resend Raw headers Status code: 9 200 OK Version: HTTP/1.1 ₹ Filter headers Response headers (0.363 KB) Cache-Control: "no-cache" Content-Length: "0" Date: "Tue, 21 Mar 2017 19:10:17 GMT" Expires: "-1" Pragma: "no-cache" Server: "Microsoft-IIS/10.0" X-AspNet-Version: "4.0.30319" X-Powered-By: "ASP.NET" X-SourceFiles: "=?UTF-8?B?QzpcVXNlcnNcTEVOT1ZPXERvY3Vt...FdlYkFQSUhlbGxvXGFwaVxwcm9kdWN0cw==?=" Request headers (0.383 KB) Host: "localhost:12345" User-Agent: "Mozilla/5.0 (Windows NT 10.0; WOW64; rv:52.0) Gecko/20100101 Firefox/52.0" Accept: "application/json" Accept-Language: "en-US,en;g=0.5" Accept-Encoding: "gzip, deflate" Content-Type: "application/json" Connection: "keep-alive" Upgrade-Insecure-Requests: "1" Cache-Control: "max-age=0, no-cache" Content-Length: "60"

This XML file does not appear to have any style info

```
-<ArrayOfProduct>
 -< Product>
     <ProductId>1</ProductId>
     <Pre><Pre>oductName>Monitor</Pre>
     <ProductPrice>10000</ProductPrice>
   </Product>
  -< Product>
     <ProductId>2</ProductId>
     <Pre><Pre>roductName>Keyboard</Pre>
     <ProductPrice>1500</ProductPrice>
   </Product>
 -< Product>
     <Pre><Pre>oductId>3</Pre>
     <Pre><Pre>roductName>Mouse</Pre>
     <ProductPrice>400</ProductPrice>
   </Product>
 -< Product>
     <Pre><Pre>ductId>4</Pre>
     <Pre><Pre>roductName>printer</Pre>
     <ProductPrice>6000</ProductPrice>
   </Product>
 </ArrayOfProduct>
```