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```
13 {
14     "Freezing", "Bracing", "Chilly", "Cool", "Mild", "Warm", "Balmy", "Hot
15 };
16
17 [HttpGet("[action]")]
18 public IEnumerable<WeatherForecast> WeatherForecasts()
19 {
20     var rng = new Random();
21
22     {
23         DateFormatted = DateTime.Now.AddDays(index).ToString("d"),
24         TemperatureC = rng.Next(-20, 55),
25         Summary = Summaries[rng.Next(Summaries.Length)]
26     });
27 }
28
29 public class WeatherForecast
30 {
```

Location: SampleDataController.cs, line 20 character 13 ("WebApplication8.Controllers.SampleDataController.WeatherForecasts()")

STEVE SMITH

30 AUG 2017

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Breakpoint Labels in Visual Studio

Breakpoints offer a great way to debug our software, letting us literally stop time during code execution and inspect what's going on at that moment. It's a bit like being a speedster like Quicksilver, who can almost stop time and manipulate the environment between moments in time:

Quicksilver Scene HD - X Men Apocalypse 2016



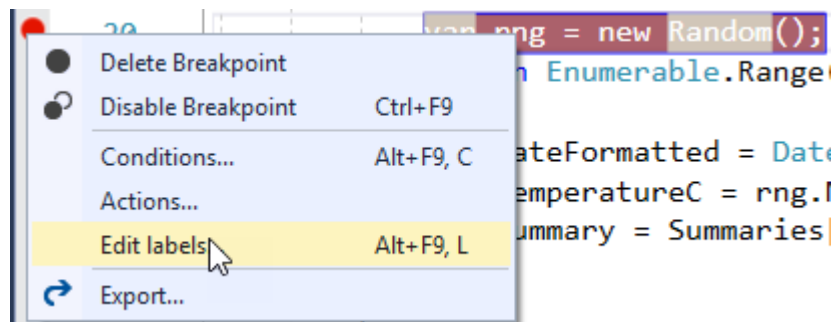
Unfortunately, in larger applications, we may find that we have quite a few places where we want to stop and inspect the code. We may have a dozen or more breakpoints, and some of them may be hit multiple times within a given user interaction with the application. There are a number of features that can help with this, but today the one I want to discuss is breakpoint labels.

Within Visual Studio, once you've created a breakpoint, you can add one or more labels to it by simply right-clicking and choosing Edit Labels:

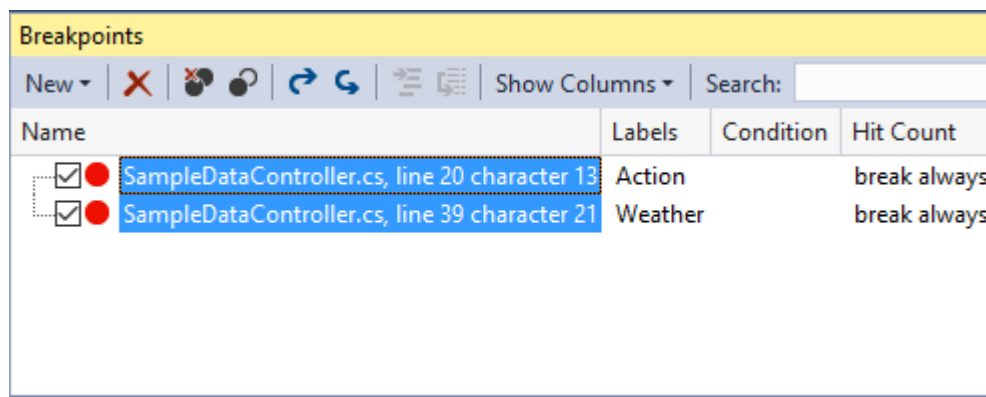
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After adding labels to breakpoints, you can view them in the Breakpoints window:



The Breakpoints window is useful for quickly navigating to certain breakpoints, as well as for enabling or disabling breakpoints (or setting conditions – more on that in another post).

Visual Studio will persist your breakpoints, so when you close and reopen your solution, your breakpoints (and their labels and whether or not they are enabled) will remain. In some cases, it may make sense for you to keep some breakpoints around as just a part of your codebase as you navigate around in it. Of course, since they're stored in .suo files that typically aren't checked into source control, you probably won't be sharing your breakpoints with other members of your team. But that doesn't mean they're not useful for you.

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If you present code at conferences, user groups, etc., you may find labeled breakpoints useful during demos. You can add a label like “Demo1” to some breakpoints, and “Demo2” to others. Toggle which breakpoints are enabled when you run your application in order to demonstrate different topics.

This feature has been around for quite a while, though I believe in the earliest versions it was limited to certain versions of Visual Studio. I think today in Visual Studio 2017 you can access this feature from all versions (please leave a comment if this isn't the case and let me know).

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About Steve Smith

Steve is an experienced software architect and trainer, focusing currently on ASP.NET Core and Domain-Driven Design. His courses on [Pluralsight](#) help developers write better, more maintainable code. He is available for [application assessments](#) and [team mentoring engagements](#).

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ozkanb — If nobody can access the replicated data except the testing agent, no privacy rule is violated. What other concern could there be? There are ways

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ardalis — No, but to be fair, nothing is slow on this machine. I don't have any problems with VS2019 on my other machines, either, including my 2014 MBP,

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Matthew Edmondson — Also remember that user-specific. So if you're installing the tool by a tool ran under a different user it

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Graeme — Do you have video or eLearning of this course? I live in New Zealand and it's not possible to attend a workshop in person

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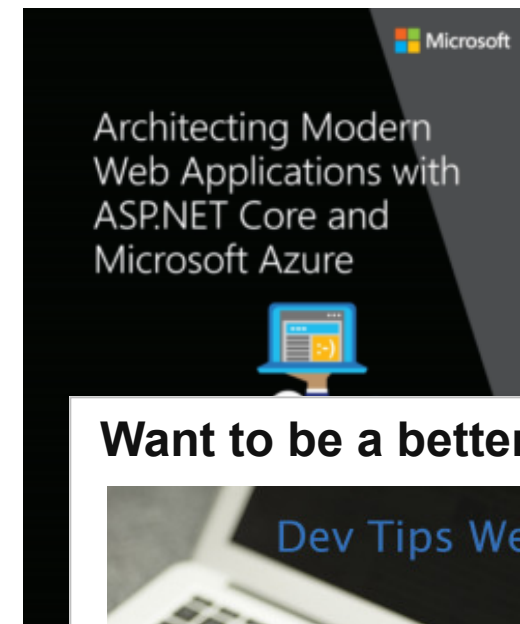
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