One of the questions that I got when I was designing this course was, how do we know if we have enough tests for a method or a class? That's when a code coverage tool comes into the picture. A code coverage tool, scales your code and tells you what parts of your code are not tested. In terms of the code coverage products out there, you have two options, you can either use Visual Studio Enterprise Edition, or you can use ReSharperUltimate. ReSharper Ultimate comes with this product called Dot Cover, which is basically a unit test runner as well as a code coverage tool. Now currently, I don't have Dot Cover, because I'm not using ReSharper Ultimate, I'm using Jet Brains, RiderIDE. Now at the time of recording this video, Rider doesn't have code coverage. But let me show you a screenshot of code coverage in action. So if you go to jetbrains.com/dotcover, scroll down, okay this is how code coverage works. So you can see we have two methods here, you get square and circle. This circle method doesn't have any tests, and that's why we have these red lines on the left side.

In contrast, all lines against (?) square method are tested and that's why they're green. Now these are simple methods, sometimes you might have a complex method with multiple execution paths. And you can see exactly what execution paths are tested and what paths were not tested.

However, the fact that all the execution paths in the method are tested, doesn't mean you have written enough tests for a (?) method. That means you have simply tested all the execution paths based on the current

implementation. But as I told you before, it is possible that (?) implementation has a problem.

That's why I said when writing tests, you should always think of your methods as black boxes. Don't rely yet on the implementation. Use that as a guide line to get you started. But then you need to brainstorm all the execution paths, based on different inputs you can give to that function. So if you're in an enterprise environment, I recommend you to either get Visual Studio Enterprise Edition, or use ReSharper Ultimate.

There is also a third product, and that is NCover which has been around for a long time, it's fairly expensive, I personally prefer ReSharper Dot Cover.