1. Julie- I am a Dev at Google. I work up in the Seattle office. And I work in  
   the Angular team on testing. Specifically, I'm the author of Protractor, the end-to-end testing framework.
2. it's built on top of WebDriver. WebDriver is a tool that defines an API between tests and browsers, and then tries to implement those API actions, which are things like clicking on an element, getting the text from an element, etcetera. WebDriver is a standard for how those should be implemented and how all browsers should respond to them. And they tend to respond, like a browser would respond to a native event. So actually clicking on it as opposed to just triggering a click event, there's some subtleties in there that would make it actually act differently like a real user clicked on it.
3. So Protractor is built on top of that. WebDriver has a limited API and often runs into issues where you get things like race conditions because the webpage is slow or something else happens. So what Protractor does is it's built specifically for Angular applications. And since we know more about a site, given that it’s based on Angular, then we know any generic page on the internet, we  
   can do smarter things. So we have hooks inside Angular that Protractor uses to ask when is the page stable, and things like how could I find an element based on some binding… strings bound to a string, user for example. So we use those hooks to try to make testing more stable and less flaky.  
   And then Protractor also has a full command line runner, and that helps with getting WebDriver setup and running tests and getting good output from tests