CS 240: Method Overloading Transcript

This video shows a split screen of Professor Wilkerson on the right and a PowerPoint screen on the left. Visual descriptions are not needed.

[00:00:00] **JEROD WILKERSON:** Method overloading is another important concept you need to be aware of and that you will use.

[00:00:06] You've actually been using it, but you probably haven't been aware of it.

[00:00:08] It has some similarities to method overriding, but mostly, it's the names that are similar.

[00:00:14] Method overloading allows you to reuse a method name with a different argument list.

[00:00:20] Probably, the best example I can give is the PrintWriter class.

[00:00:24] You've actually been using the PrintWriter class.

[00:00:26] When you call System.out.println or System.out.print, you're using the PrintWriter class, and you're using an instance of it that is attached to your console.

[00:00:38] It has methods that allow you to print any data type.

[00:00:43] Here is a subset of the methods that you can see on this slide.

[00:00:46] You can see that there are multiple print methods.

[00:00:49] There's print(boolean), print(char), print(char []), print(double), float, and so on.

[00:00:53] We also have several print line methods.

[00:00:56] You have print line methods basically for every data type.

[00:01:01] If you call n print methods for every data type, if you call it on an object, that object will be converted to a string by calling toString, and then that string will be printed.

[00:01:11] This is a case where you've been using method overloading, maybe without realizing it.

[00:01:16] The benefit is that it allows you to reuse a method name for things that are conceptually the same thing, but where the code would be different because of different data types.

[00:01:28] For example, if you think about what code you might have to write in order to print a double, that would be different than the code that you would write to print a string or an object.

[00:01:40] But conceptually, it's the same thing.

[00:01:42] You're just printing something.

[00:01:43] This allows you to do what is conceptually the same thing, but it's technically different with different data types without needing to think of different names and without needing to remember different method names.