

CS 240: Console User Interfaces Transcript

[00:00:00] **INSTRUCTOR:** In this video, we're going to talk about console user interfaces. Now, what do I mean by console? Well, the word console is pretty much synonymous with what some people might call a command prompt, or a shell, or it's really just a window where you type in command line commands.

[00:00:18] And we're going to learn how to create user interfaces in a terminal or a console. That's another word, terminal. And so, we're all used to using graphical user interfaces that most modern applications have.

[00:00:34] But it turns out that you can create some fairly nice looking user interfaces in a console. And we're going to learn how to do that specifically for the project that we do in the class. It's a neat thing to learn how to do anyway, but this is how we're going to build the user interface for the chess project.

[00:00:53] And these images show you some examples of user interfaces that people have built in a console. Typically, as programmers, when we print output to the console with `System.out.println`, I mean, usually we're used to very plain, unformatted text kind of showing up on the screen.

Start visual description. Slide titled Console User Interfaces. Text reads:

- *Typically, when a program prints output to the console (or terminal), the text is plain without much formatting*
- *However, it is possible to create fairly nice console user interfaces that include formatted and colored text and use character-based graphics*

End visual description.

[00:01:14] And it just scrolls by as you print more and more, and so forth. And so, that's what we're mostly used to. But it turns out that in a console, when you print to the console, you can actually control the color of each cell on the screen.

[00:01:36] You can also make, well, you can change the background color, the foreground color. You can change effects like bold, italic, underline, things like that.

[00:01:46] And so, even though we're used to the text just scrolling up as we print more and more output, you can actually just think of the console window as just a rectangular grid of cells and each cell can print one character and it can have any background color, any text color, and it can also use the effects that I just described.

[00:02:09] Now, this picture on the left is a picture of a file explorer that somebody built probably in the early 2000s, and this is similar to the file explorer in Windows or the finder in the Mac, and you can see that it just lets you browse the directories on your file system, and you can look at the files, you can open the files, you can just do that kind of thing.

[00:02:38] And then on the right we have another picture that shows a text editor application that is implemented in the console.

[00:02:47] So you can see here there's two windows side by side, each with a different document, and somebody can just edit those as we would typically do. And so, These are all built totally with `System.out.println` kinds of output and so that's what we will learn how to learn how to create.