



>> Now, let's consider escape sequences and, and how they're used. What if we wanted to print a quotation mark, that's our double quote? As you know, that starts a string and ends a string. So here, we're trying to print out ("I said "Hello" to you."). We want that whole string out, but we want quotes around Hello.

You can see by the coloring that the first quote, before I, starts a string, but that second quote, right before Hello, actually ends a string, and Hello is sort of out on its own there. So that's not gonna work. So what we need is this escape sequence which actually lets a character through.

It begins with a backslash, and in our example here, we've got, open quote, I said. And then we've got backslash quote and that says to the printer, to the print statement there, allow this quote through. Don't think of it as closing or opening a string, but just send it on to the printer to print it to the screen there.

And then the same thing with the quote following Hello. We got a backslash quote, and that, that let's this quote through. And then finally, we close it off with a quote. So this would actually print ("I said \"Hello\" to you.") and Hello would be in quotes. So here are some others escape sequences, these are the common ones, backslash t as a tab.

And then we got backslash n for newline. Backslash r is the carriage return, this is used in MS-DOS or Windows the Windows Operating System. UNIX just uses the newline, but and Windows use carriage return, newline together. Then to get a double quote is backslash quote single quote, backslash single quote there.

And then if you wanna actually print a backslash, you've gotta say backslash, unless left that backslash in because backslash by itself is used as the escape character. So let's take a look at at escape sequences. We'll see those in a program. This program here, we're going to print how do I print a tab, and then on the next line, we got backslash t and there's our tab.

And then down here in line 15 and 16, we're going to tab over and then also put quotes around escape sequence with the, with the backslash quote. And then on the line then on line 18 and 19, we're going to tab over. Go to a new line and then tab on the new line, and then at the end of all of that, we're gonna go to another line, so we're gonna skip a line.



This is a print line, so it takes us to the next line, but this backslash in actually skips a line. Then the last two statements there we're gonna actually print out backslashes. So let's let's set a breakpoint, And hit our little bug button. So down, down there in the Run I/O tab, we can see our, we're tabbing over.

Now, in jGRASP, a tab is set to three spaces, so you can actually change that if you like, but that's standard for a programming environment. And so now we're gonna send out a tab and then some quotes. And so we get escape sequence quoted there. Next, we're going to do something more complicated.

We're gonna tab over, go to the next line, tab over. And then we'll go to the next line again, and then the print actually takes it to line. So this is gonna end up skipping a line there, you'll see. And there we are. So there's the first tab over, and then we went to the next line, tabbed over, escape sequence.

And then finally, we skipped a line, that's what the backslash n was here at the end of this line. So now, the last item here is to actually get some backslashes out. So the first backslash says, left this one through. So that would print one backslash. And then the next one here, we're gonna, we got four backslashes in a row.

The first one says let one through and then the third one there says let another one through. So we end up with those guys there, OK? And then our our program ends.