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Computational Methods for Systems and Control Theory

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Scientific Computing 1
Handout 1
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Special Characters and their Meanings in `bash`

*	serves as a placeholder for arbitrarily many characters
?	a placeholder for a single character
/	directory separator
\	escape character for quoting special characters and to mark linebreaks
~	abbreviation for your home directory
|	the pipe operator: connects two simple commands to a new one by redirecting the output of the one on the left to the other one on the right. || represents a logic OR.
<	fetches the input for a command (on the left) from a file or device (on the right)
>	redirects the output of a command (on the left) to a file or device (on the right)
2>	same as above for the error output only, can be used to redirect the standard error messages to standard output so it is recognized by the > and | as well via 2>&1
1>	same as above for the standard output without the errors
>>	as > but appends the output instead of overwriting the file
$	used in command substitution and for referring to shell and environment variables
&	a single & after a command name sends the execution to the background. Double && stand for the logic AND.
`	accent grave is used for command substitution
'	single quotes removes the special meaning of all special characters enclosed by them.
"	double quotes act the same as single quotes with the exception of the $, `,\ (and sometimes !) characters keeping their special properties.
blank	the simple blank is used to separate words and thus needs to be escaped when , e.g., a file name contains it.
#	comment character; everything following this character on the same line will be dropped