**BASH Conditionals Cheatsheet**

|  |  |  |
| --- | --- | --- |
| **Mathematical comparisons** | | |
| Function | [[ ]] | (( )) |
| Equal to | if [[ 5 -eq 6 ]] | if (( 5 = 5 )) |
| Not equal to | if [[ 5 -ne 6 ]] | if (( 5 != 5 )) |
| Less than | if [[ 5 -lt 6 ]] | if (( 5 = 5 )) |
| Less than or equal to | if [[ 5 -le 6 ]] | if (( 5 <= 5 )) |
| Greater than | if [[ 5 -gt 6 ]] | if (( 5 > 5 )) |
| Greater than or equal to | if [[ 5 -ge 6 ]] | if (( 5 >= 5 )) |

|  |  |
| --- | --- |
| **String Comparisons** | |
| Function | Examples |
| Is string1 equal to string2? | if [[ string1 = string2 ]] |
| Is string1 NOT equal to string2? | if [[ string1 != string2 ]] |
| Does string1 match a wildcard? | if [[ string1 == string2\* ]] |
| Does string1 match a regular expression? | If [[ string1.tar =~ 1.tar$ ]] |
| Is variable VAR zero length (empty)? | if [[ -z $VAR ]] |

|  |  |
| --- | --- |
| **File/dir types** | |
| Function | Examples |
| Does file/dir exist? | if [[ -e /dir/file.txt ]] |
| Does file have size? | if [[ -s /dir/file.txt ]] |
| Does file exist? | if [[ -f /dir/file.txt ]] |
| Does directory exist? | if [[ -d /dir ]] |
| Is file writable? | if [[ -w /dir/file.txt ]] |
| Is file readable? | if [[ -r /dir/file.txt ]] |
| Is file executable? | if [[ -x /dir/file.txt ]] |

| **Compound Comparisons** | | |
| --- | --- | --- |
| Logical Operator | Examples | |
| Logical NOT | if ! [ -e file ] && [ -x file ] | if ! [[ -e file && -x file ]] |
| Logical AND | if [ -e file ] && [ -x file ] | if [[ -e file && -x file ]] |
| Logical OR | if [ -r file ] || [ -x file ] | If [[ -r file || -x file ]] |