

CST8177 – Linux II

Shell programming, set and shift

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Today's Topics

- ▶ review scripting tools so far
- ▶ set
- ▶ shift

regular expressions

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\$

[]

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posix character classes

scripting

- ▶ exit status
- ▶ test program
- ▶ positional parameters
- ▶ if statements
- ▶ while loops

combining tests together

- ▶ building complex tests from simple tests
- ▶ test1 -a test2
 - both test1 and test2 must be true
- ▶ test1 -o test2
 - at least one must be true
- ▶ ! test1
 - test1 must be false
- ▶ (test1)
 - true if test1 is true

set

- ▶ set with arguments but no options sets the positional parameters to the arguments
- ▶ \$# is the number of arguments
- ▶ \$1 is the first arg
- ▶ \$2 is the second arg
- ▶ \$3 is the third arg
 - etc
- ▶ \$@ and \$* are all args

shift

- ▶ shift
- ▶ moves all the arguments to the left
- ▶ shift n moves all the arguments to the left by n
- ▶ shift
 - \$# is decreased by 1
 - the pre-shift \$1 is lost
 - \$1 becomes what was in \$2
 - \$2 becomes what was in \$3
 - \$3 becomes what was in \$4
 - etc

&& means "and"

- ▶ Suppose you might qualify for a scholarship:
- ▶ Those who qualify are:
 - eight feet tall, and ??
 - born on the moon, and ??
 - algonquin student and ??
- ▶ or in other words
 - eight feet tall && ??
 - born on the moon && ??
 - algonquin student && ??
- ▶ In which case do we need to find out what ?? is?

|| means "or", opposite of &&

- ▶ As soon as we encounter "true", we can stop
- ▶ You qualify for a \$1000 rebate under the following conditions:
 - born on the moon, or ??
 - algonquin student, or ??
- ▶ In the first case, we need to know what the exit status of the ?? is, we need to run the ?? command
- ▶ In the second case, we can stop before running the ?? command

&& and || versus -a and -o

- ▶ && and || are used with commands that tend to get things done
 - to graduate, you
 - complete first year && complete second year
 - complete first year is a "command" that gets things done: you learn the first-year material
- ▶ -a and -o are used in test, and don't do things, just affect the exit status of test
 - you are a rich canadian if
 - you are canadian -a you are rich
 - checking whether or not you're canadian doesn't get things done – but it does establish a truth value