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AWK Cheat Sheet

Basics I

$1	Reference first column
awk '/pattern/ {action}' file↵	Execute action for matched pattern 'pattern' on file 'file'
;	Char to separate two actions
print	Print current record line
$0	Reference current record line

Variables I

$2	Reference second column
FS	Field separator of input file (default whitespace)
NF	Number of fields in current record
NR	Line number of the current record

Basics II

^	Match beginning of field
~	Match opterator
!~	Do not match operator
-F	Command line option to specify input field delimiter
BEGIN	Denotes block executed once at start
END	Denotes block executed once at end
str1 str2	Concat str1 and str2

One-Line Exercises I

awk '{print $1}' file↵	Print first field for each record in file
awk '/regex/' file↵	Print only lines that match regex in file
awk '!/regex/' file↵	Print only lines that do not match regex in file
awk '$2 == "foo"' file↵	Print any line where field 2 is equal to "foo" in file
awk '$2 != "foo"' file↵	Print lines where field 2 is NOT equal to "foo" in file
awk '$1 ~ /regex/' file↵	Print line if field 1 matches regex in file
awk '$1 !~ /regex/' file↵	Print line if field 1 does NOT match regex in file

Variables II

FILENAME	Reference current input file
FNR	Reference number of the current record relative to current input file
OFS	Field separator of the outputted data (default whitespace)
ORS	Record separator of the outputted data (default newline)
RS	Record separator of input file (default newline)

Variables III

CONVFMT	Conversion format used when converting numbers (default %.6g)
SUBSEP	Separates multiple subscripts (default 034)
OFMT	Output format for numbers (default %.6g)
ARGC	Argument count, assignable
ARGV	Argument array, assignable
ENVIRON	Array of environment variables

Functions I

index(s,t)	Position in string s where string t occurs, 0 if not found
length(s)	Length of string s (or $0 if no arg)
rand	Random number between 0 and 1
substr(s,index,len)	Return len-char substring of s that begins at index (counted from 1)
srand	Set seed for rand and return previous seed
int(x)	Truncate x to integer value

Functions II

split(s,a,fs)	Split string s into array a split by fs, returning length of a
match(s,r)	Position in string s where regex r occurs, or 0 if not found
sub(r,t,s)	Substitute t for first occurrence of regex r in string s (or $0 if s not given)
gsub(r,t,s)	Substitute t for all occurrences of regex r in string s

Functions III

system(cmd)	Execute cmd and return exit status
tolower(s)	String s to lowercase
toupper(s)	String s to uppercase
getline	Set $0 to next input record from current input file.

One-Line Exercises II

awk 'NR!=1{print $1}' file↵	Print first field for each record in file excluding the first record
awk 'END{print NR}' file↵	Count lines in file
awk '/foo/{n++}; END {print n+0}' file↵	Print total number of lines that contain foo
awk '{total=total+NF};END{print total}' file↵	Print total number of fields in all lines
awk '/regex/{getline;print}' file↵	Print line immediately after regex, but not line containing regex in file
awk 'length > 32' file↵	Print lines with more than 32 characters in file
awk 'NR==12' file↵	Print line number 12 of file

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