awk Tutorial

AWK is a tool for reporting text which is arranged in rows and columns. AWK name is derived from the family names of its authors – **Alfred Aho, Peter Weinberger, and Brian Kernighan**.

Versions

- **AWK** - this is original AWK from AT & T Laboratory.
- **NAWK** - this is newer and improved version of AWK from AT & T Laboratory.
- **GAWK** - this is GNU AWK. All GNU/Linux distributions ship GAWK and is fully compatible with AWK and NAWK.

AWK assumes the file given is arranged in columns with each line having different fields.

awk: Actions

awk is a pattern-action language. Action can be one or more from the following list separated by semicolons ‘;’

- print [list of expressions] [>expression]
- printf format [, list of expressions]

Usage

Command line Usage:

awk ‘/<pattern>/ {action} ‘ <inputfile>
awk ‘<condition> {action} ‘ <inputfile>
awk ‘{action} ‘ <inputfile>
awk ‘/patterns/ {action1}’ <inputfile>

print & printf

Print Usage

{print <text>}
{print "<text>", <vars>"}

Printf Usage

Printf("format", var list)

Format of 'C' languages printf can be used
%s → String
%d → integer
%f → float
Eg
"Name is %s"

Relational Operators	
Operator	**Meaning**
==	Is equal
!=	Is not equal to
>	Is greater than
>=	Is greater than or equal to
<	Is less than
<=	Is less than or equal to

Logical Operators	
Operator	**Meaning**
&&	Logical And
||	Logical OR operator
!	Logical Not operator

Built-in variables

FS	Field separator
NR	Number of current record
NF	Number of fields in current record
RS	Record separator
$0	Entire input record
$n	n-th field in current record
FILENAME	Current filename

Columns

awk is designed to work with text files which are arranged in columns unlike sed which works on streams of text . Every line in the file is called as Record and columns of that particular line is called as Field. Each Filed can be addressed with its position within the Record (line) like the fist column can be referred as $1 and next as $2 so on.

EX: (emp.txt)

100	scott	accounts	accountant	4000	
200	richard	sales	salesman		3000
300	rishi	account	executive		3500
400	cyrus	production	engineer	4500	
500	anita	sales	caller	3000	
600	dave	administration	manager	6000	