

# **Laporan Praktikum**

## **PROGSIS**



**Disusun Oleh :**

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## AWK Basic Syntax

```
Save modified buffer (ANSWERING "No" WILL DESTROY CHANGES)

[root@localhost awk_code]# {print}
-bash: {print}: command not found
[root@localhost awk_code]# awk '{print}' nilai.txt
nama      sub      nilai
maruli     virkom   98
brian      probstat 97
jeremi     progsis  98
alex       delcha   96
[root@localhost awk_code]#
```

awk 'BEGIN{printf "No\tName\t\tSub\t\tMarks\t\n"} {print}' nilai.txt

## AWK Program File

```
[ Wrote 4 lines ]

[root@localhost awk_code]# awk -f command.awk nilai.txt
awk: error: can't open source file 'command.awk' for reading (Is a directory)
[root@localhost awk_code]# awk -f comand.awk nilai.txt
kepin      matdis   88
kepin      matdis   88
maruli     virkom   98
maruli     virkom   98
brian      probstat 97
brian      probstat 97
jeremi     progsis  98
jeremi     progsis  98
alex       delcha   96
alex       delcha   96
[root@localhost awk_code]#
```

awk -f comand.awk nilai.txt

## AWK Standard Options

```
[ Wrote 4 lines ]

[root@localhost awk_code]# awk -v name=maruli 'BEGIN{printf "Name = %s\n", name}'
Name = maruli
[root@localhost awk_code]#
```

Opsi --dump-variable [= file]

```
CentOS 7 64-bit

[root@localhost awk_code]# awk --dump-variables ' '
[root@localhost awk_code]# cat awkvars.out
ARGC: 1
ARGIND: 0
ARGV: array, 1 elements
BINMODE: 0
CONVFMT: "%.6g"
ERRNO: ""
FIELDWIDTHS: ""
FILENAME: ""
FNR: 0
FPAT: "[^[:space:]]+"
FS: " "
IGNORECASE: 0
LINT: 0
NF: 0
NR: 0
OFMT: "%.6g"
OFS: " "
ORS: "\n"
RLENGTH: 0
RS: "\n"
RSTART: 0
RT: ""
SUBSEP: "\034"
TEXTDOMAIN: "messages"
[root@localhost awk_code]#
```

## Awk help

```
[root@localhost awk_code]# awk --help
Usage: awk [POSIX or GNU style options] [-f progfile] [--] file ...
Usage: awk [POSIX or GNU style options] [-v] 'program' file ...
POSIX options:      GNU long options: (standard)
  -f progfile      --file=progfile
  -F fs            --field-separator=fs
  -v var=val       --assign=var=val
Short options:      GNU long options: (extensions)
  -b              --characters-as-bytes
  -C              --traditional
  -c              --copyright
  -d[file]        --dump-variables[=file]
  -e 'program-text' --source='program-text'
  -E file         --exec=file
  -g              --gen-pot
  -h              --help
  -I [fatal]      --lint[=fatal]
  -n              --non-decimal-data
  -M              --use-lc-numeric
  -O              --optimize
  -p[file]        --profile[=file]
  -P              --posix
  -r              --re-interval
  -S              --sandbox
  -t              --lint-old
  -V              --version

To report bugs, see node 'Bugs' in 'gawk.info', which is
section 'Reporting Problems and Bugs' in the printed version.

gawk is a pattern scanning and processing language.
By default it reads standard input and writes standard output.

Examples:
  gawk '{ sum += $1 }; END { print sum }' file
  gawk -F: '{ print $1 }' /etc/passwd
[root@localhost awk_code]#
```

## Contoh Dasar-AWK

```
[root@localhost awk_code]# awk '{print $3"/t"$4}' nilai.txt
awk: cmd. line:1: (FILENAME=nilai.txt FNR=1) fatal: division by zero at
[root@localhost awk_code]# awk '{print $3"/t"$4}' nilai.txt
matdis/t88
virkom/t98
probstat/t97
progsis/t90
delcha/t96
[root@localhost awk_code]# _
```

## Mencetak Semua baris

```
delcha/t96
[root@localhost awk_code]# awk '/m/ {print $0}' nilai.txt
1)    kepin        matdis        88
2)    maruli       virkom        98
4)    jeremi       progsis       90
[root@localhost awk_code]#
```

## Mencetak Kolom berdasarkan Pola

```
awk: cmd. line:1:      unterminated string
awk: cmd. line:1: /a/ {print $3"$4}
awk: cmd. line:1:      ^ syntax error
[root@localhost awk_code]# awk '/a/ {print $3 "\t" $4}' nilai.txt
matdis 88
virkom 98
probstat 97
delcha 96
[root@localhost awk_code]#
```

Cetak kolom dalam urutan yang diinginkan

```
jeremi 98
[root@localhost awk_code]# awk '/m/ {print $4 "\t" $3}' nilai.txt
88      matdis
98      virkom
98      progsis
[root@localhost awk_code]#
```

Menghitung dan Mencetak jumlah Pola Yang Cocok

```
98      progsis
[root@localhost awk_code]# awk '/m/ {++cnt} END {print "Count=",cnt}' nilai.txt
Count= 3
[root@localhost awk_code]#
```

Pencetakan isi dari baris dengan Lebih dari 20 Karakter

```
98      virkom
98      progsis
[root@localhost awk_code]# awk '/m/ {++cnt} END {print "Count=",cnt}' nilai.txt
Count= 3
[root@localhost awk_code]# awk 'length($0) > 20' nilai.txt
awk: cmd. line:1: (FILENAME=nilai.txt FNR=1) fatal: file name too long
[root@localhost awk_code]# awk 'length($0) > 20' nilai.txt
2)      maruli      virkom      98
3)      brian      probstat      97
4)      jeremi      progsis      98
[root@localhost awk_code]# _
```

Tugas:

Buat sebuah file berekstensi .txt yang berisi data mahasiswa dengan urutan baris: nim, nama, mata kuliah dan dosen pengampu mata kuliah tersebut dan tampilkan baris yang hanya berisi string "Marojahan Sigirow"

GNU nano 2.3.1		File: data_mahasiswa.txt	
13321007	Albert Panggabean	PAP	Ahmad Purwalaksana
13321011	Yerobeam	ENGLISH III	Monalisa Pasaribu
13321014	Asita Tambunan	PROGSIS	Marojahan Sigirow
13321021	Rico Situmorang	PROBSTAT	Ike Fitriyaningsih
13321022	Haratama Tamba	JARKOM	Eka Sinambela
13321029	Naek Butarbutar	JARKOM	Eka Sinambela
13321049	Trisna Lumbanraja	PAP	Ahmad Purwalaksana
13321051	Ruth Simamora	PROGSIS	Marojahan Sigirow
13321052	Necia Sitohang	UIRKOM	Gerry Italiano
13321060	Merry Tamba	PROBSTAT	Ike Fitriyaningsih

```
[root@localhost awk_code]# awk 'BEGIN{print "NIM\tNama\tMata_kuliah\tDosen_pengampu\t"} {print }' data_mahasiswa.txt
```

NIM	Nama	Mata_kuliah	Dosen_pengampu
13321007	Albert Panggabean	PAP	Ahmad Purwalaksana
13321011	Yerobeam	ENGLISH III	Monalisa Pasaribu
13321014	Asita Tambunan	PROGSIS	Marojahan Sigiros
13321021	Rico Situmorang	PROBSTAT	Ike Fitriyaningsih
13321022	Haratama Tamba	JARKOM	Eka Sinambela
13321029	Naek Butarbutar	JARKOM	Eka Sinambela
13321049	Trisna Lumbanraja	PAP	Ahmad Purwalaksana
13321051	Ruth Simamora	PROGSIS	Marojahan Sigiros
13321052	Necia Sitohang	UIRKOM	Gerry Italiano
13321060	Merry Tamba	PROBSTAT	Ike Fitriyaningsih

“Marojahan Sigiros”

```
[root@localhost awk_code]# awk '/Marojahan Sigiros/ {print $0}' data_mahasiswa.txt
```

13321014	Asita Tambunan	PROGSIS	Marojahan Sigiros
13321051	Ruth Simamora	PROGSIS	Marojahan Sigiros

```
[root@localhost awk_code]# awk '/Marojahan Sigiros/ {print $5 "\t" $6}' data_mahasiswa.txt
```

Marojahan	Sigiros
Marojahan	Sigiros

```
[root@localhost awk_code]# awk '/Marojahan Sigiros/ {print $1 "\t" $5 "\t" $6}' data_mahasiswa.txt
```

13321014	Marojahan	Sigiros
13321051	Marojahan	Sigiros

Hitunglah jumlah kemunculan huruf “a” dan “i” pada string diatas.

```
[root@localhost awk_code]# awk -n '/RE/{A; I;} {++cnt} END {print "Count = ", cnt}' data_mahasiswa.txt
```

Count = 11

Buat sebuah file yang berisi matriks 3 x 3. isi dengan angka acak dan carilah average (nilai rata-rata) dari setiap baris matriks tersebut.

```
GNU nano 2.3.1 File: matriks
```

1	2	3
4	5	6
7	8	9

```
GNU nano 2.3.1 File: grades.txt
```

```
{ total = $1 + $2 + $3 ;
  avg = total / 3
  print avg }
```

```
[root@localhost awk_code]# awk -f grades.txt matriks
```

2  
5  
8