LESSON 2

report.awk

```
awk -F, '{
  print $NF
}' data.csv
```

AWK

Fields & Records



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AWK SCRIPTING

LESSON 2

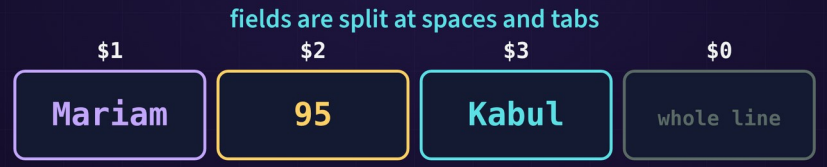
Fields and Records

$0, $1, NF, NR, the -F option, FS and OFS

Records and Fields

report.awk

```
Mariam 95 Kabul
```



- Each line is a record. AWK splits the record into fields at spaces and tabs, and numbers …
- Dollar zero is the whole line. So print dollar three, dollar one prints the third field, …

01

NF and NR

terminal

```
$ awk '{ print NR, $0 }' scores.txt
1 Mariam 95 Kabul
2 Ahmad 88 Herat

$ awk '{ print $NF }' scores.txt     # last field
Kabul
Herat

$ awk 'NR > 1' data.csv              # skip header
```

- NF is the number of fields in the current line, so dollar NF is always the last field. NR …
- Print NR, dollar zero numbers every line. And NR greater than one skips a header line in a …

02

Choosing the Separator: -F

terminal

```
$ awk -F, '{ print $2 }' students.csv
$ awk -F: '{ print $1, $7 }' /etc/passwd
root /bin/bash

$ awk 'BEGIN { FS = "," } { print $1 }' students.csv
$ awk -F'[ ,]+' '{ print $3 }' mixed.txt
```

- Many files are not separated by spaces. Use dash F to set the field separator: dash F comma …
- Inside a program, set FS in a BEGIN block. FS can even be a regular expression, like one or …

03

Output Separator: OFS

to_csv.awk

```
BEGIN { OFS = "," }
{ $1 = $1; print }        # rebuild $0 with commas

# input : Mariam 95 Kabul
# output: Mariam,95,Kabul
```

- The comma in a print statement inserts OFS, the output field separator, which is a space by …
- Set OFS to a comma to turn a space-separated file into CSV. One trick: assign dollar one to …

04

Changing Fields

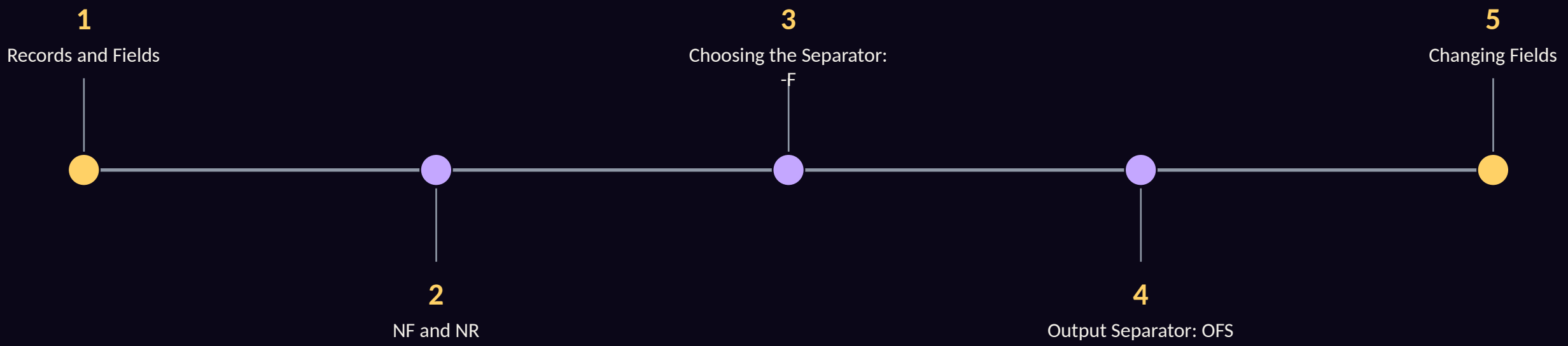
grade.awk

```
{
    $2 = $2 * 1.1                    # 10% bonus
    $4 = ($2 >= 60) ? "pass" : "fail"  # new field
    print
}
# Mariam 104.5 Kabul pass
```

- You can assign to any field. Dollar two equals dollar two times 1.1 gives everyone a ten …
- You can even create new fields: dollar four equals pass or fail. AWK adds the field and …

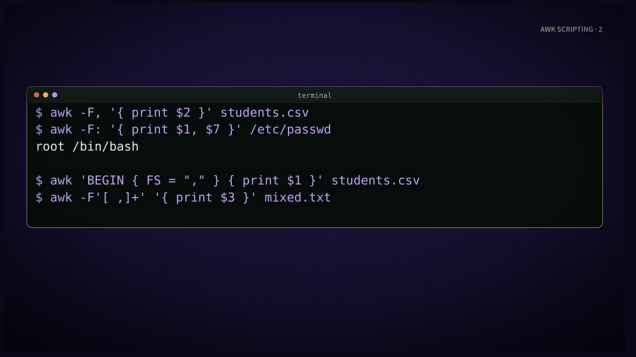
05

Lesson Map


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Records and Fields
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NF and NR
3
Choosing the Separator: -F
4
Output Separator: OFS
5
Changing Fields

Sources and Further Reading





Thank you for watching

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