Advanced File Operations

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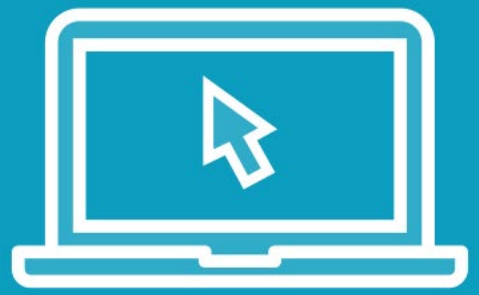
SOFTWARE DEVELOPER

Demo



Linking files

- Hard links
- Soft (symbolic) links

Moving Files

mv original_file hard_link_file

ln original_file

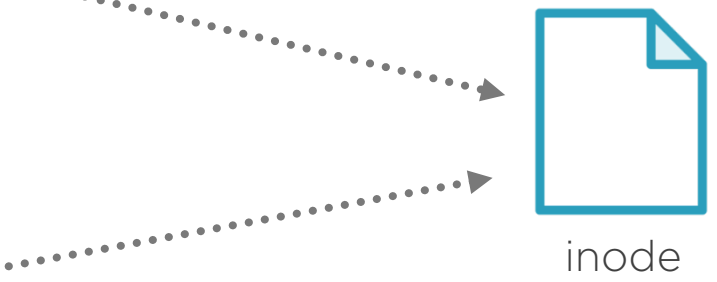
hard_link_file

Moving Files

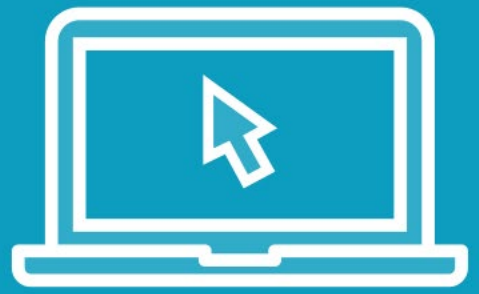
mv original_file hard_link_file

rm original_file

hard_link_file



Demo



Matching patterns with grep

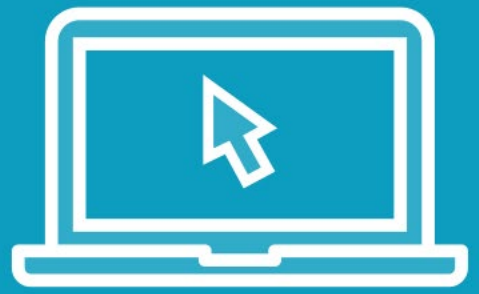
grep

Global regular expression print

Prints the lines that match a pattern

Regular expressions

Demo



Transforming text with SED

SED

Stream editor

Streaming lines from input to output

Executing operations on each line

SED Workflow

file

first line
second line
third line

Input stream

$ sed '' file

Pattern space

first line

Hold buffer

Output stream

Terminal

first line

SED Workflow

file

$ sed '' file

Terminal

second line
third line

Input stream

Pattern space

second line

Output stream

first line
second line

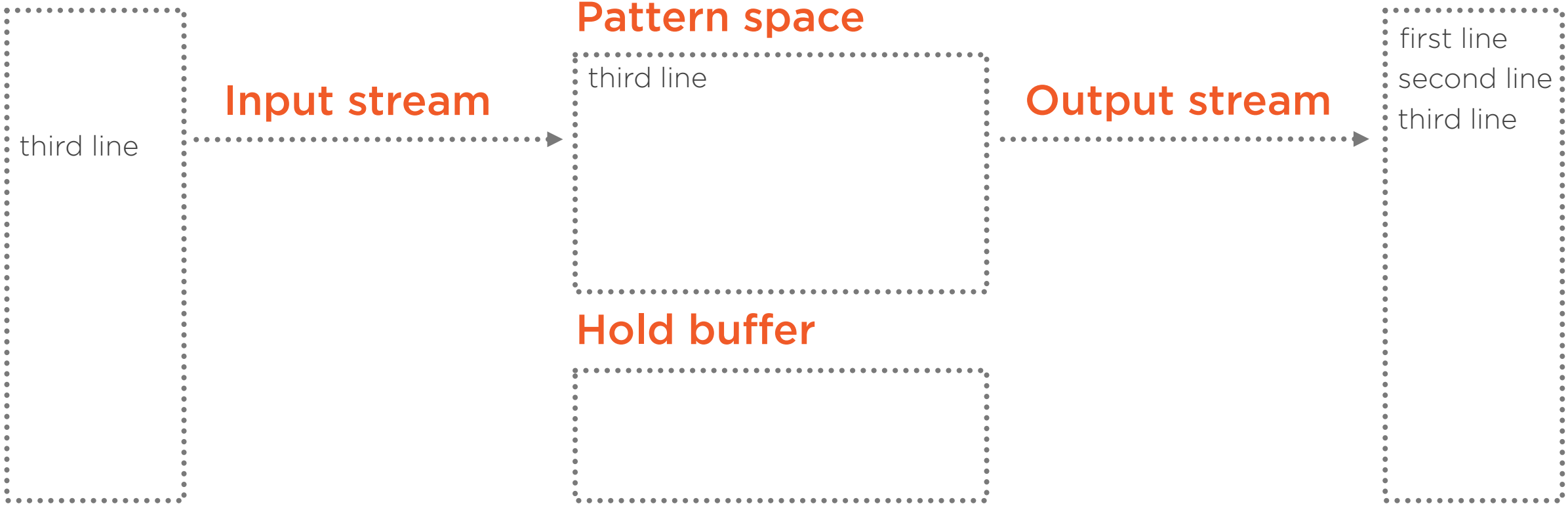
Hold buffer

SED Workflow

file

```
$ sed '' file
```

Terminal



SED Workflow

file

Tesla line

$ sed 'h' file

Terminal

Input stream

Pattern space

Tesla line

Output stream

Hold buffer

Tesla line

SED Workflow

file

$ sed '' file

Terminal

Input stream

Pattern space

Output stream

Hold buffer

Tesla line

SED Workflow

file

$ sed 'g' file

Terminal

Input stream

Pattern space

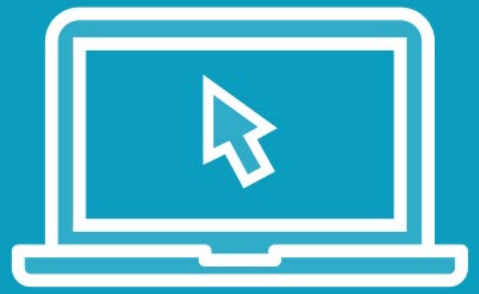
Tesla line

Output stream

Hold buffer

Tesla line

Demo



Programming with AWK

AWK Workflow

```
awk
'BEGIN {

}
        {

}
END {

}'
filename
```

AWK Workflow

```
awk
'BEGIN {
        print "execute before everything"
}

        {
        print "execute on each line from the input stream"
}

END {
        print "execute after everything"
}'

filename
```

AWK Workflow

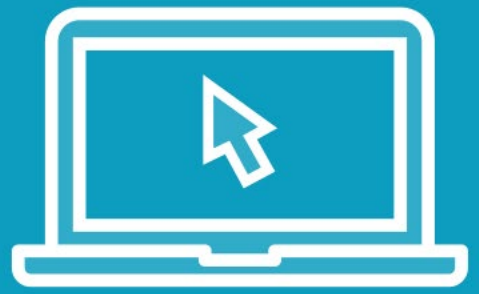
```
awk
'BEGIN {
        print "execute before everything"
}
/expression/            {
        print "execute on each line from the input stream"
}
END {
        print "execute after everything"
}'
filename
```

AWK Workflow

awk

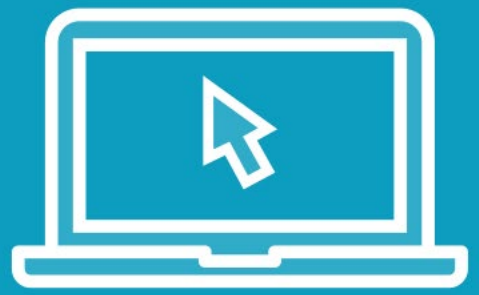
Alfred Aho
Peter Weinberger
Brian Kernighan

Demo



Seeing file differences with diff

Demo



Archiving files with tar

Compressing with bzip2 and gzip

Tar Options

Option	Purpose
v	Verbose output
f	Use an archive file
c	Create an archive
t	List the archive content
x	Extract files from an archive
z	Gzip compression
j	Bzip2 compression

Compression Utilities

gzip

bzip2

Summary

Creating links with ln

- Hard and soft (symbolic) links

Searching for patterns with grep

Transfoming text files with SED and AWK

Finding file differences with diff

Archiving and compressing files with tar