How Bash Processes Command Lines

Worked Example 1

In this Video…

- We will be visually working through the process together on some example commands

By the end, you will be able to:

- Mentally walk through how the shell will process a given command line
- Explain how each of the steps of shell operation are handled for a given command line

Let’s Go!

Download Section Cheat Sheet

Initial Command Line

```
echo  $name  >  $out
```

Parameter Definitions:

name=“simon.smith”

out=“output.txt”

Step 1: Tokenisation – Identify Unquoted Metacharacters

```
echo $name > $out
```

Step 1: Tokenisation – Find Words and Operators

```
echo  $name  >  $out
```

Step 2: Command Identification

```
echo  $name  >  $out
```

Step 3: Expansions – Brace Expansion (Stage 1)

```
echo  $name  >  $out
```

There are no brace expansions

Step 3: Expansions – (Stage 2)

```
echo  simon.smith  >  output.txt
```

Step 3: Expansions – Word Splitting (Stage 3)

```
echo  simon.smith  >  output.txt
```

There is no word splitting, because the results of the expansions do not contain space, tab, or newline characters

Step 3: Expansions – Globbing (Stage 4)

```
echo  simon.smith  >  output.txt
```

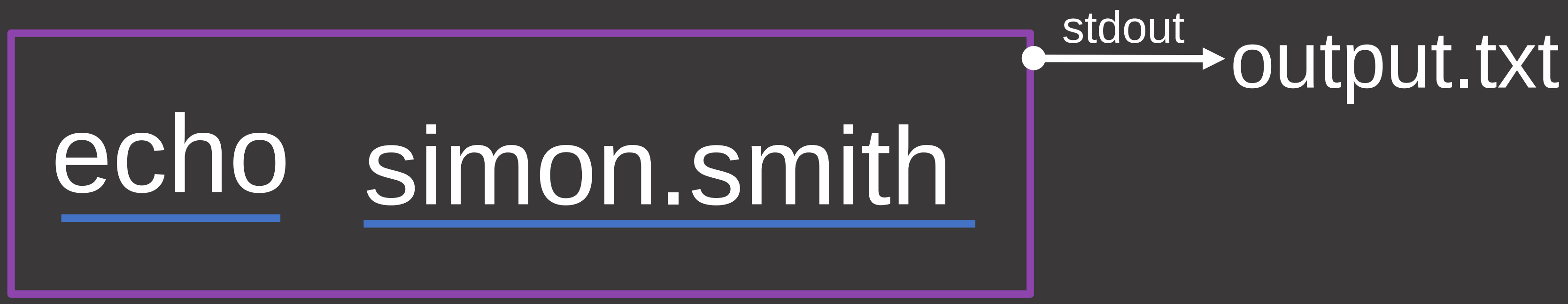
There is no globbing, because none of the words contain any unquoted special pattern characters

Step 4: Quote Removal

```
echo simon.smith > output.txt
```

There is no quote removal

Step 5: Redirections



Up Next:

Worked Example 2