CSCI 211
UNIX Lab

Advanced Unix Commands (3)

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Today's Focus

- Show part of a file
- Combine data
- Check spelling
- Command line calculator
- Check disk space usage
- Get command path

head

- Show the first 10 lines

```
head file
```

- Show the first 20 lines

```
head -20 file
head -n 20 file
```

- Show all but the last 20 lines

```
head -n -20 file
```

- Show the first 20 characters

```
head -c 20 file
```

- Show all but the last 20 characters

```
head -c -20 file
```

tail

- Show the last 10 lines

```
tail file
```

- Show the last 20 lines

```
tail -20 file
tail -n 20 file
```

- Show everything starting from the 20th line

```
tail -n +20 file
```

- Show the last 20 characters

```
tail -c 20 file
```

- Show everything starting from the 20th character

```
tail -c +20 file
```

cut

- Show the first character of each line

```
cut -c1 file
```

- Show the 3rd to 5th character of each line

```
cut -c3-5 file
```

- Show all the characters starting at the 5th one of each line

```
cut -c5- file
```

- Show the 3rd to 5th, and 11th to 20th character of each line

```
cut -c3-5,11-20 file
```

- Show the second field (default delimiter: TAB)

```
cut -f2 file
```

- Show the second field with the comma as delimiter

```
cut -f2 -d',' file
```

paste

- Syntax

```
paste [-d char] filename
```

- Example

```
cut -c1-3 sourcefile > data1
cut -f 1 sourcefile > data2
cut -f 2 -d, sourcefile > data3
paste data2 data3 data1 > targetfile
paste -d' ' data2 data3 data1 > targetfile
paste -d, data2 data3 data1 > targetfile
```

Check Spelling

- Content of 'words'

```
potatoe
banana
aple
turkey
```

- Command example

```
spell words
```

- Output

```
aple
potatoe
```

Calculator (1)

- Syntax for interactive processing

  `bc` (Integer calculation by default)

  `bc -l` (Floating point calculation by default)

- Check/set number of digits after decimal

  `scale`

  `scale=n`

- Some command operators

  modulo: `%`, exponentiation: `^`, square root: `sqrt`

- Exit

  `quit` of `ctrl-d`

Calculator (2)

- Syntax for non-interactive processing

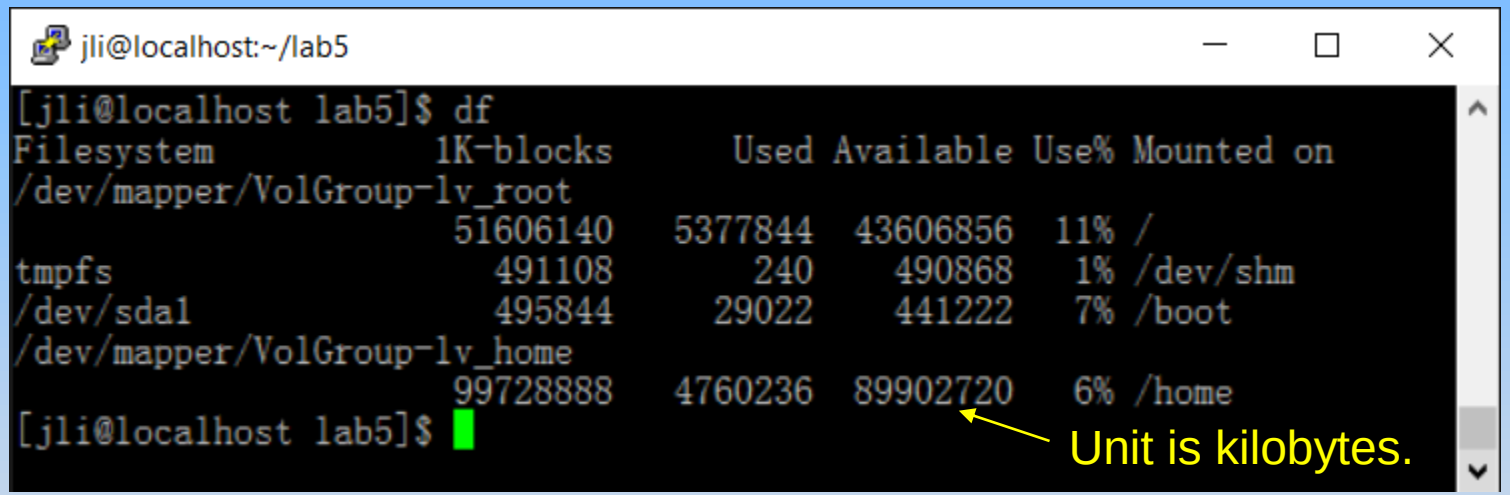
```
bc file
echo "2 % sqrt(4)" | bc
```

- File example

```
scale=4
1 / 3 + 4.5
2^(3 / 4)
quit
```

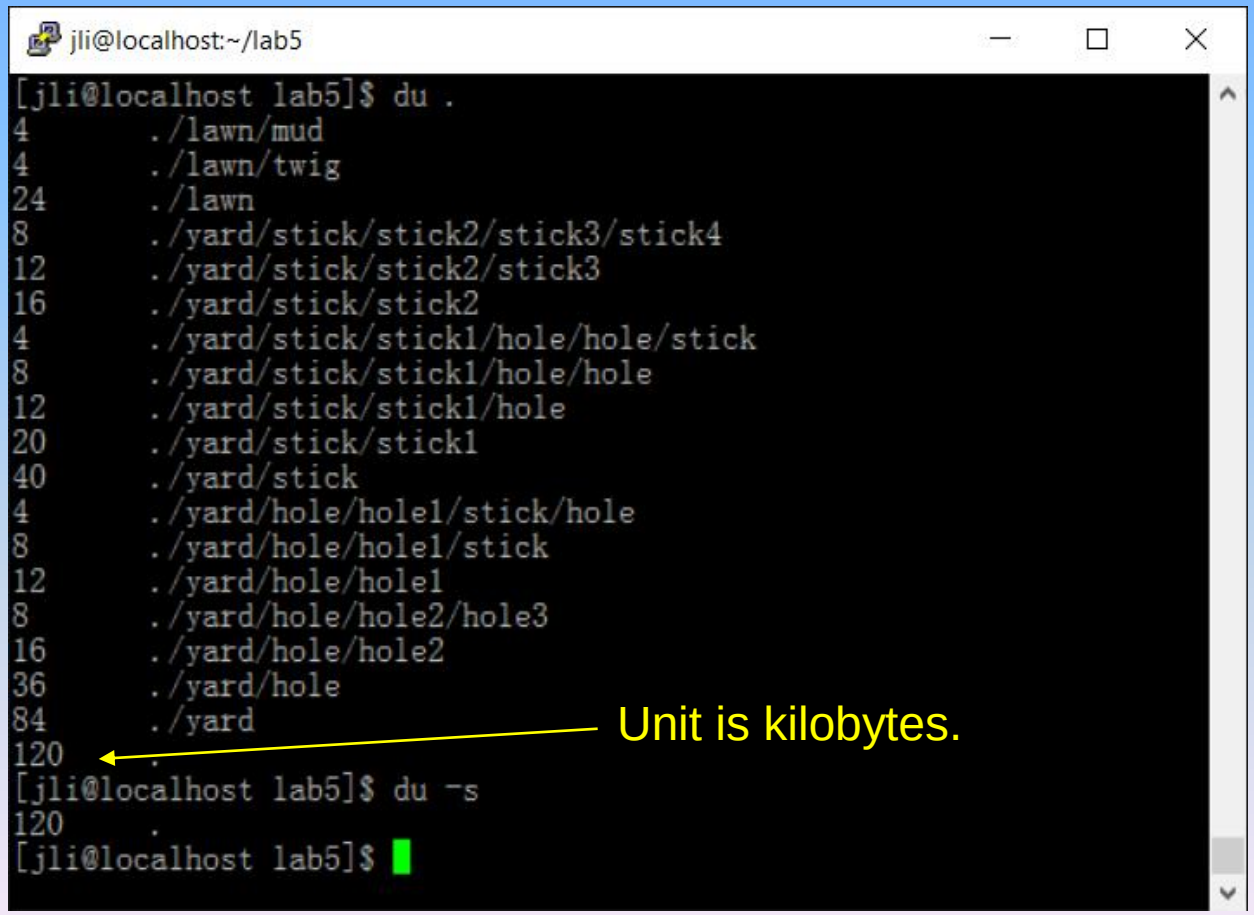
Disk Space Usage (1)

- How much is used overall? - df



Disk Space Usage (2)

- How much space is used by a file/directory? - du



Where is a command located?

- Command

  `which <command>`

- Example

  `which ls`