

Miscellaneous functions

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grep & find

- How can I find files?
- How can I find things in files?

- **find** : find files whose names match simple patterns
- **grep** : select lines from text files that match simple patterns.

grep

```
All it'd take is one flight
We'd be in the same time zone
Looking through your timeline
Seeing all the rainbows, I
I got an idea
And I know that it sounds crazy
I just wanna see ya
Oh, I gotta ask
```

“lyrics.txt”

```
$ grep time lyrics.txt
We'd be in the same time zone
Looking through your timeline
```

```
$ grep -w time lyrics.txt
We'd be in the same time zone
```

```
$ grep -w "is one" lyrics.txt
All it'd take is one flight
```

grep

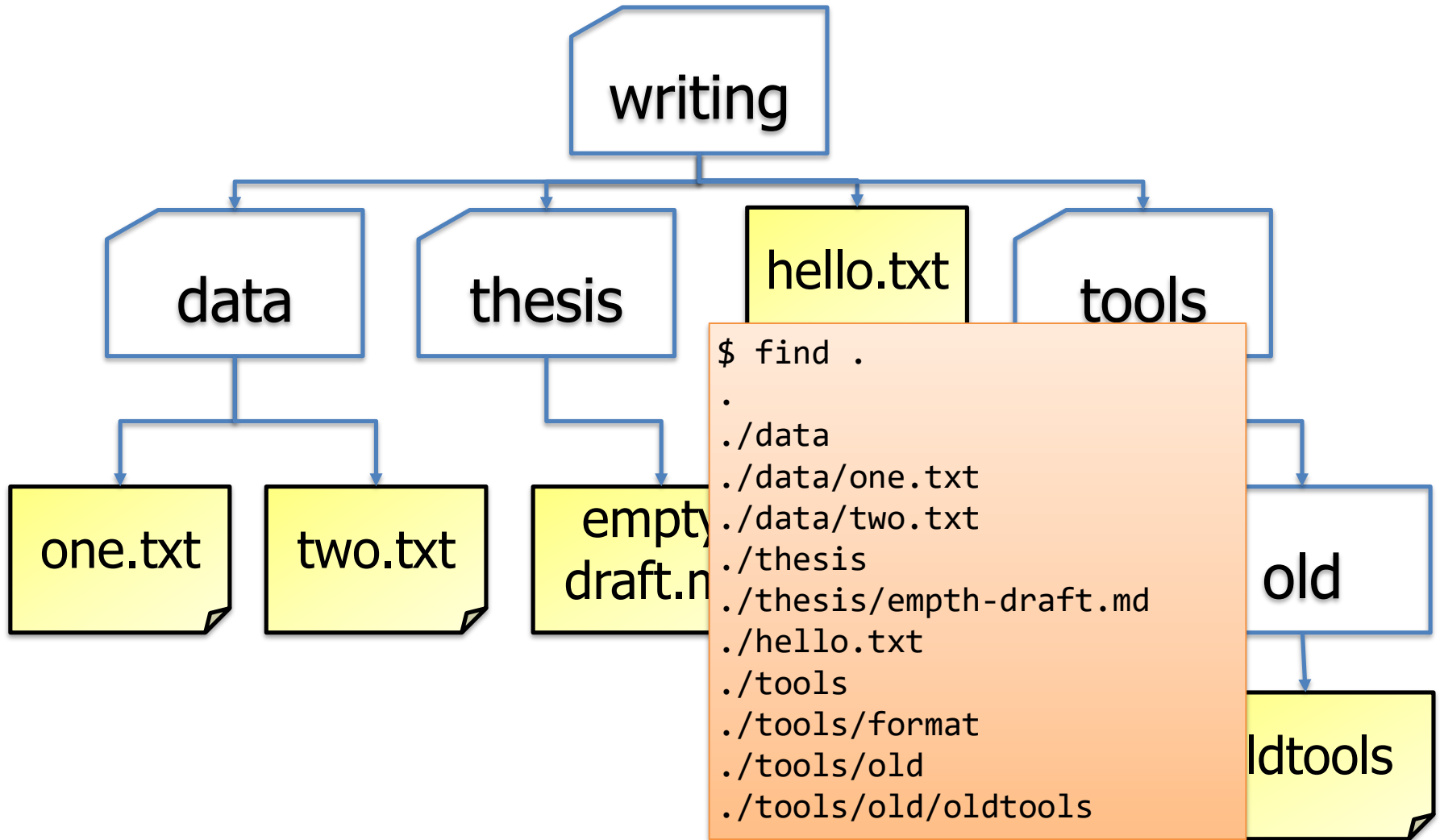
```
All it'd take is one flight  
We'd be in the same time zone  
Looking through your timeline  
Seeing all the rainbows, I  
I got an idea  
And I know that it sounds crazy  
I just wanna see ya  
Oh, I gotta ask
```

“lyrics.txt”

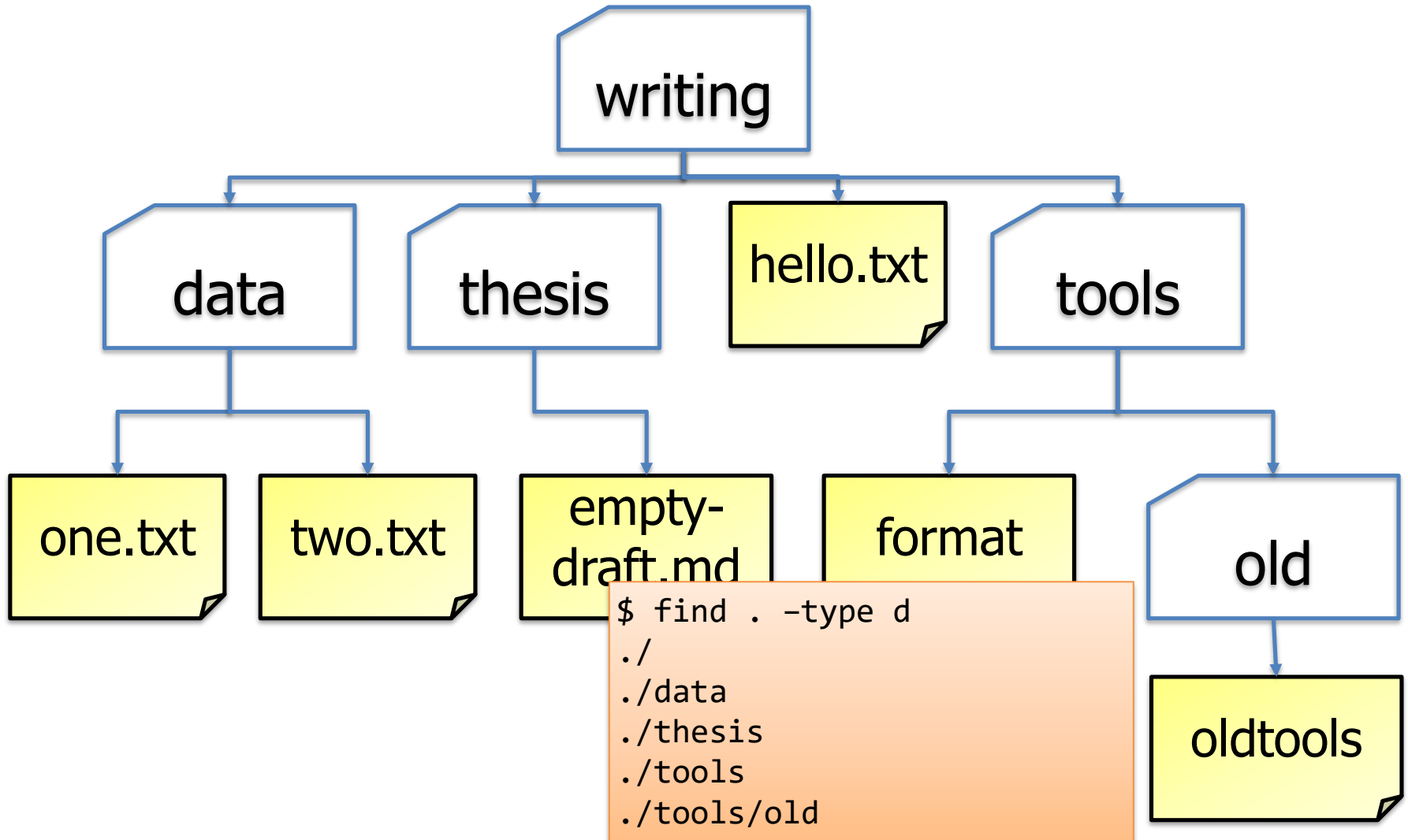
```
$ grep -n I lyrics.txt  
4:Seeing all the rainbows, I  
5:I got an idea  
6:And I know that it sounds crazy  
7:I just wanna see ya  
8:Oh, I gotta ask
```

```
$ grep -n -v I lyrics.txt  
1:All it'd take is one flight  
2:We'd be in the same time zone  
3:Looking through your timeline
```

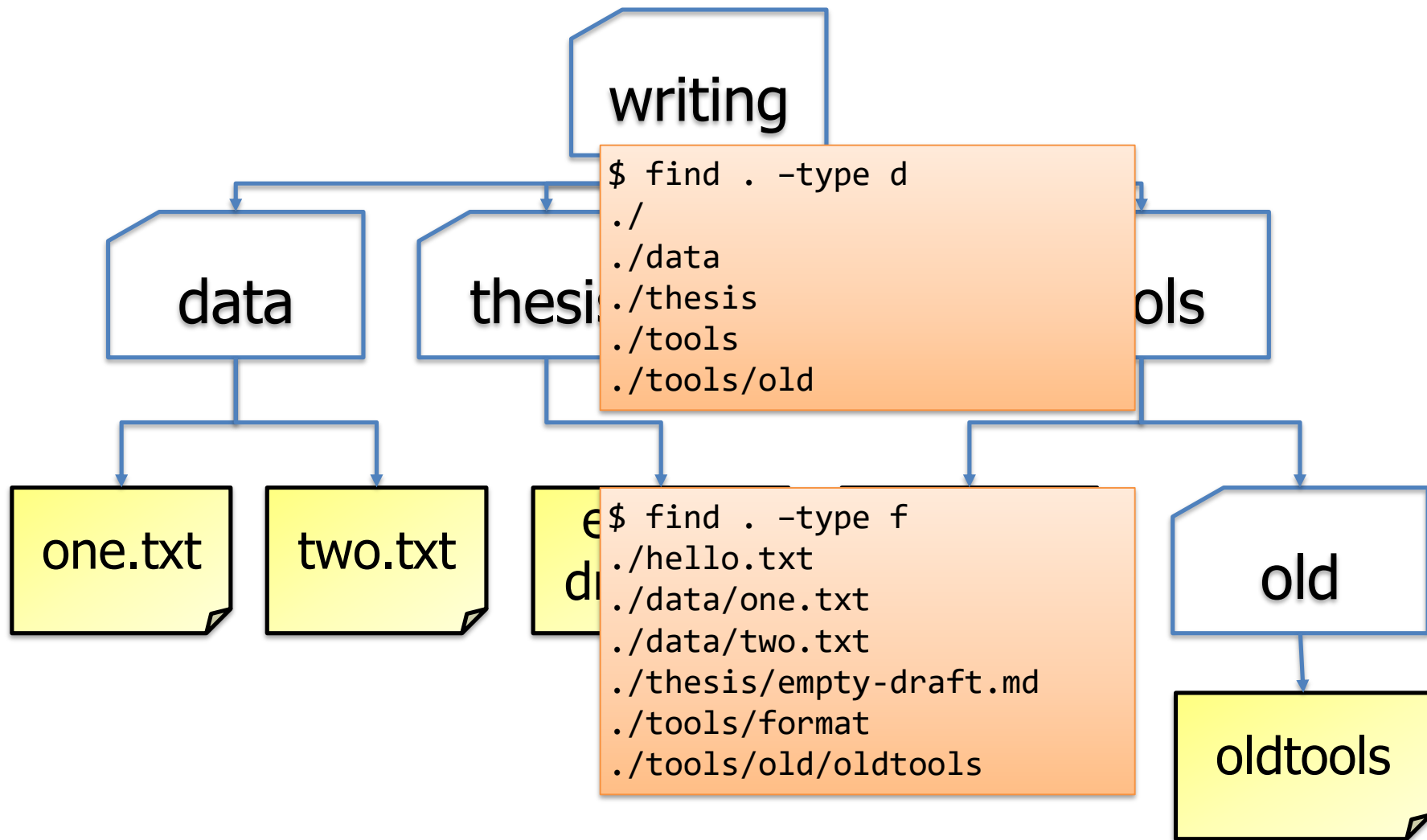
find



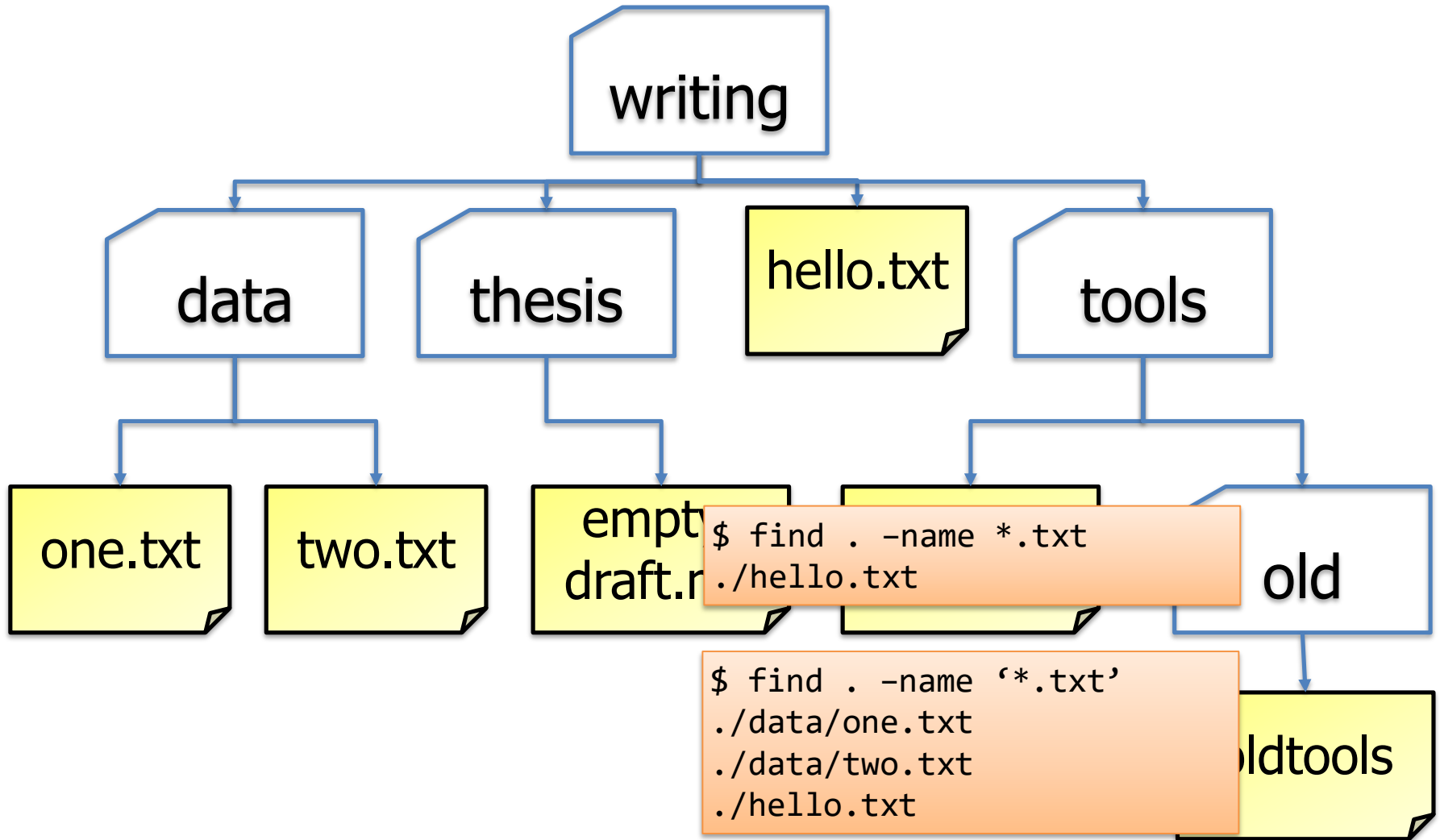
find



find



find



Regular expressions

- **^** : **Display lines starting with the character**
 - `grep ^And lyrics.txt`
- **\$** : **Display lines ending with the character**
 - `grep ya$ lyrics.txt`
- **[]** : **Match any single character in the bracket**
 - `grep [abcde] lyrics.txt`
 - Matches any character in the list
 - `grep [^abcde] lyrics.txt`
 - Matches any character NOT in the list

Regular expressions



Operator	Effect
.	Matches any single character
?	The preceding item is optional and will be matched, at most, once. 'colou?r' -> 'color', 'colour'
*	The preceding item will be matched zero or more times. 'ab*c' -> 'ac', 'abc', 'abbbbbbbc', ..
+	The preceding item will be matched one or more times. 'ab*c' -> 'abc', 'abbbbc', ...
□<	Matches the empty string at the beginning of word.
□>	Matches the empty string at the end of word.

Regular expressions

```
$ grep '\<c.*h\> /usr/share/dic/words  
caliph  
cash  
catch  
cheesecloth  
cheetah
```

Exercise

- **Make a list of files in your home directory that were changed less than 10 hours ago, using `grep`, but leave out directories.**