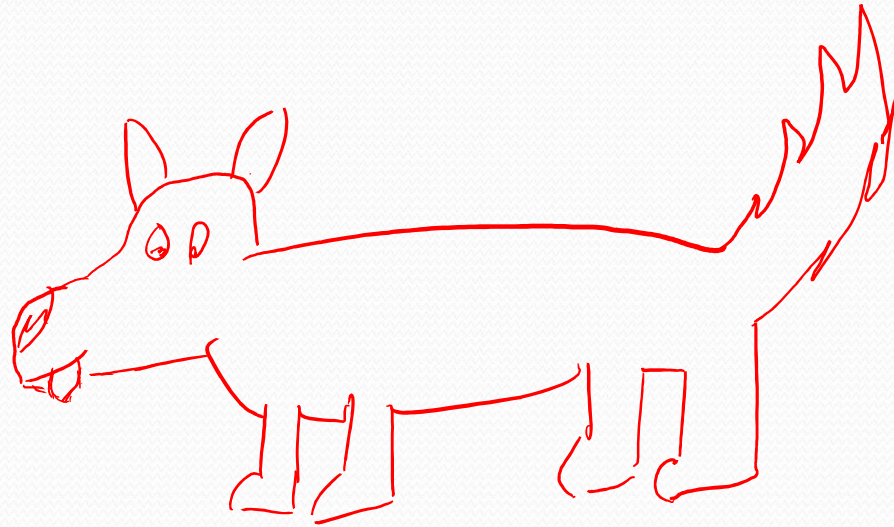


Building Java Programs

Chapter 11
Sets and Maps

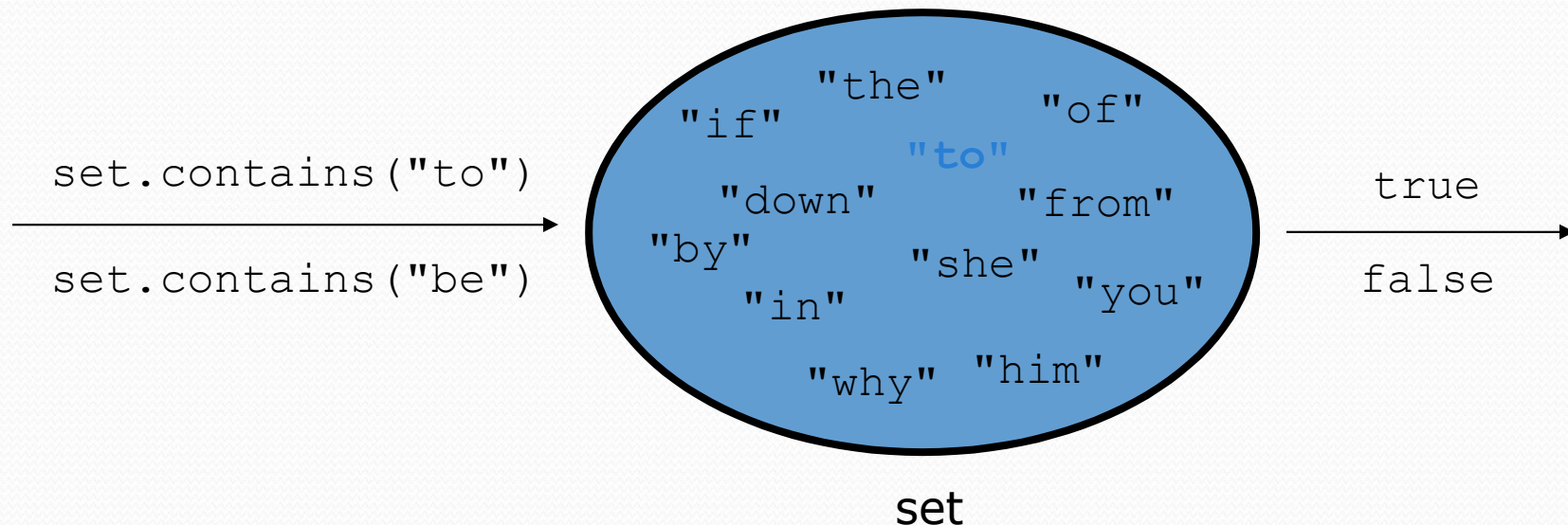
reading: 11.2 - 11.3

Bark



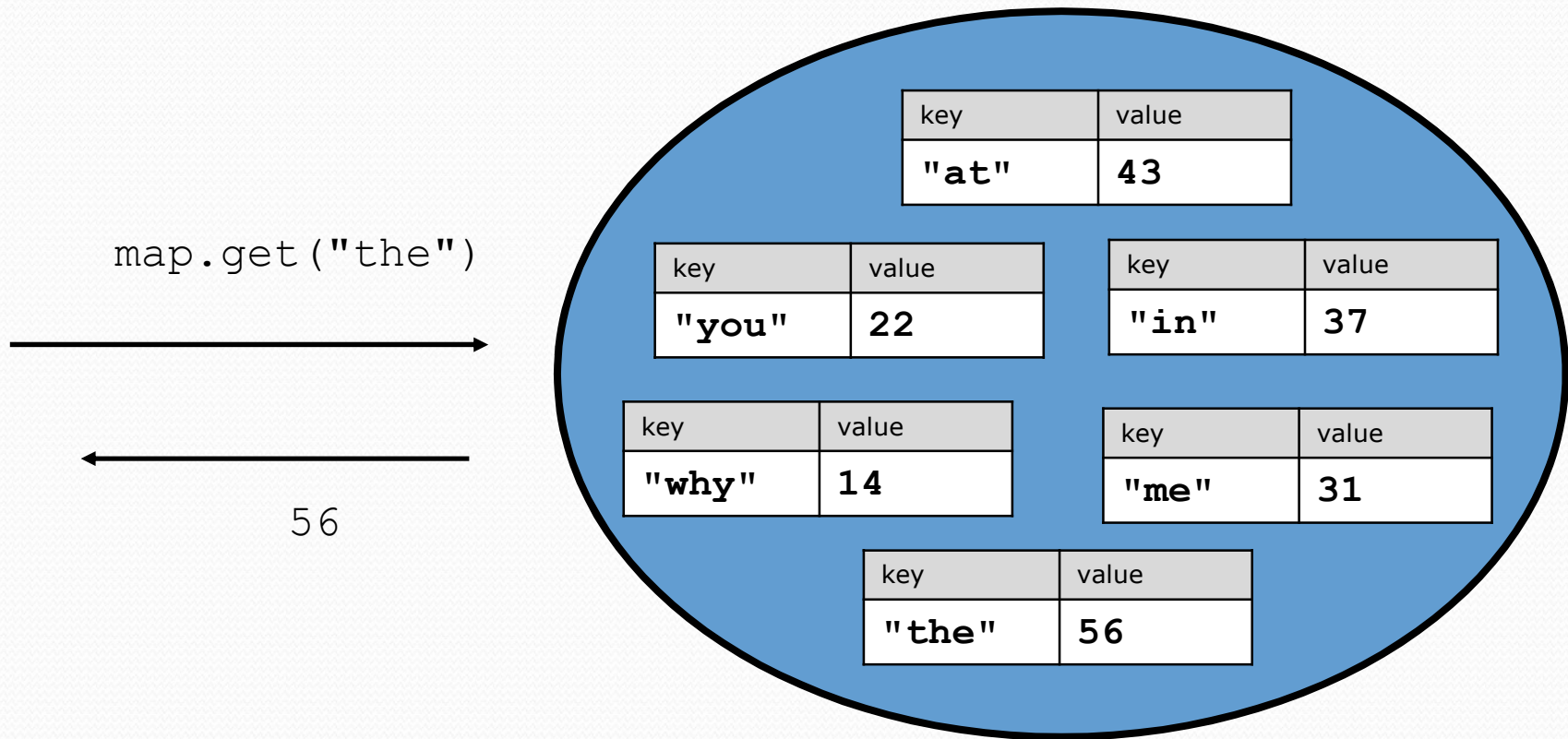
Sets (11.2)

- **set**: A collection of unique values (no duplicates allowed) that can perform the following operations efficiently:
 - add, remove, search (contains)
- We don't think of a set as having indexes; we just add things to the set in general and don't worry about order



Maps (11.3)

- **map**: Holds a set of key-value pairs, where each key is unique
a.k.a. "dictionary", "associative array", "hash"



Map methods

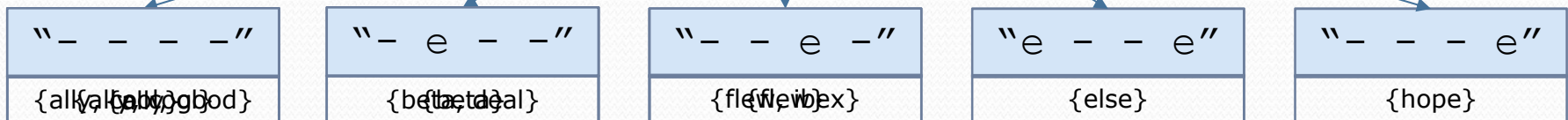
<code>put(key, value)</code>	adds a mapping from the given key to the given value; if the key already exists, replaces its value with the given one
<code>get(key)</code>	returns the value mapped to the given key (<code>null</code> if not found)
<code>containsKey(key)</code>	returns <code>true</code> if the map contains a mapping for the given key
<code>remove(key)</code>	removes any existing mapping for the given key
<code>clear()</code>	removes all key/value pairs from the map
<code>size()</code>	returns the number of key/value pairs in the map
<code>isEmpty()</code>	returns <code>true</code> if the map's size is 0
<code>toString()</code>	returns a string such as <code>"{a=90, d=60, c=70}"</code>
<code>keySet()</code>	returns a set of all keys in the map
<code>values()</code>	returns a collection of all values in the map
<code>putAll(map)</code>	adds all key/value pairs from the given map to this map
<code>equals(map)</code>	returns <code>true</code> if given map has the same mappings as this one

Evil Hangman (animation)

{ally, beta, cool, deal, else, flew, good, hope, ibex}

Guess: 'e'

Pattern: "- - - -"



Guess: 'o'

Pattern: "- - - -"

{ally, cool, good}



Guess: 'd'

Pattern: "- o o -"

{cool, good}

