

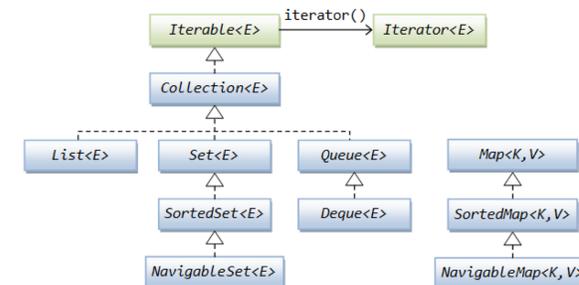
# More Sophisticated Behaviour

Technical Support System V3.0



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## Java Collections Framework:



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# Topic List

## 1. Recap: Technical Support System V2

## 2. Technical Support System V3

### – Overview

- 3 classes:
  - Responder
  - InputReader
  - SupportSystem

## 3. Class Development

### – Responder class

- Generating a related response
- ArrayList
- Map and **HashMap**

### – InputReader class

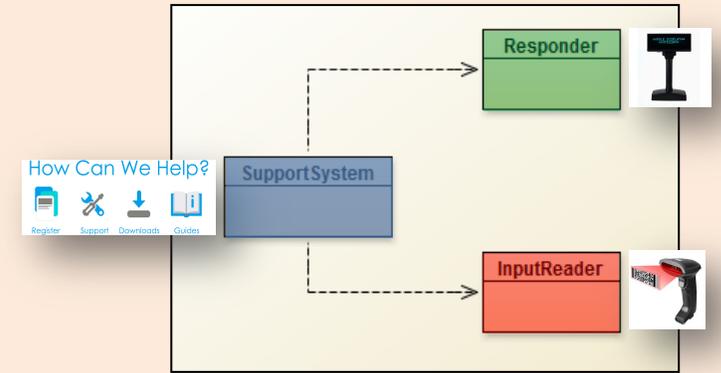
- Tokenizing Strings
- Set and **HashSet**

### – Responder class

- Finishing the class

### – SupportSystem class

- A small change.



# How do we influence the generated response?

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- What if we had a **set of words**
  - that are likely to occur in a typical question?
- What if we then **associated** these words
  - with particular **responses**?
- Then, if the user input contains a known word,
  - generate a related response!



# ArrayList

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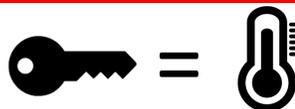


Q: Can we use an **ArrayList** for this purpose?  
i.e. Will it let us store “**key=value**” pairs?

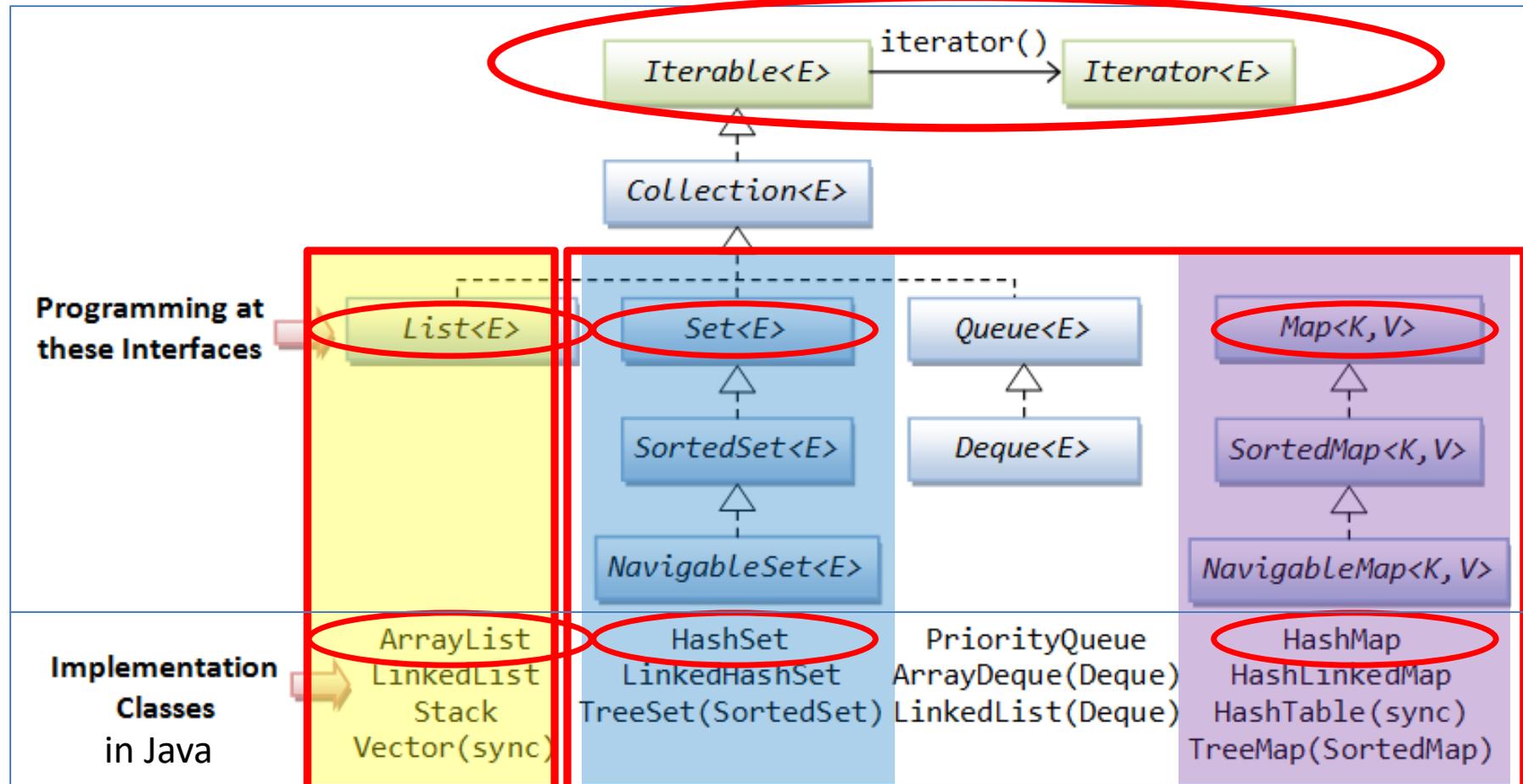
A: **No!**  
i.e. We need a different data structure.



A **Map** stores “**key=value**” pairs



# RECAP: Java's Collections Framework



Talk 8

Talk 12

**Collection Interface Concrete Implementation Classes**

Class	Map	Set	List	Ordered	Sorted
HashMap	X			No	No
Hashtable	X			No	No
TreeMap	X			Sorted	By natural order or custom comparison rules
LinkedHashMap	X			By insertion order or last access order	NO
HashSet		X		No	No
TreeSet		X		Sorted	By natural order or custom comparison rules
LinkedHashSet		X		By insertion order	No
ArrayList			X	By index	No
Vector			X	By index	No
LinkedList			X	By index	No
PriorityQueue				Sorted	By to-do order

**Any  
Questions?**

