

# WHAT TYPE OF OBJECTS CAN A COLLECTION HOLD?

THIS IS AN IMPORTANT QUESTION

IN SOME LANGUAGES LIKE PYTHON,  
A COLLECTION CAN HOLD OBJECTS OF  
ANY TYPE

# JAVA ENFORCES TYPE-SAFETY

IN JAVA, ALL VARIABLES HAVE DECLARED TYPES

THIS HELPS AVOID ERRORS OF THE SORT  
WHERE A PROGRAMMER EXPECTS AN OBJECT  
TO BE A NUMBER, BUT ITS ACTUALLY A STRING

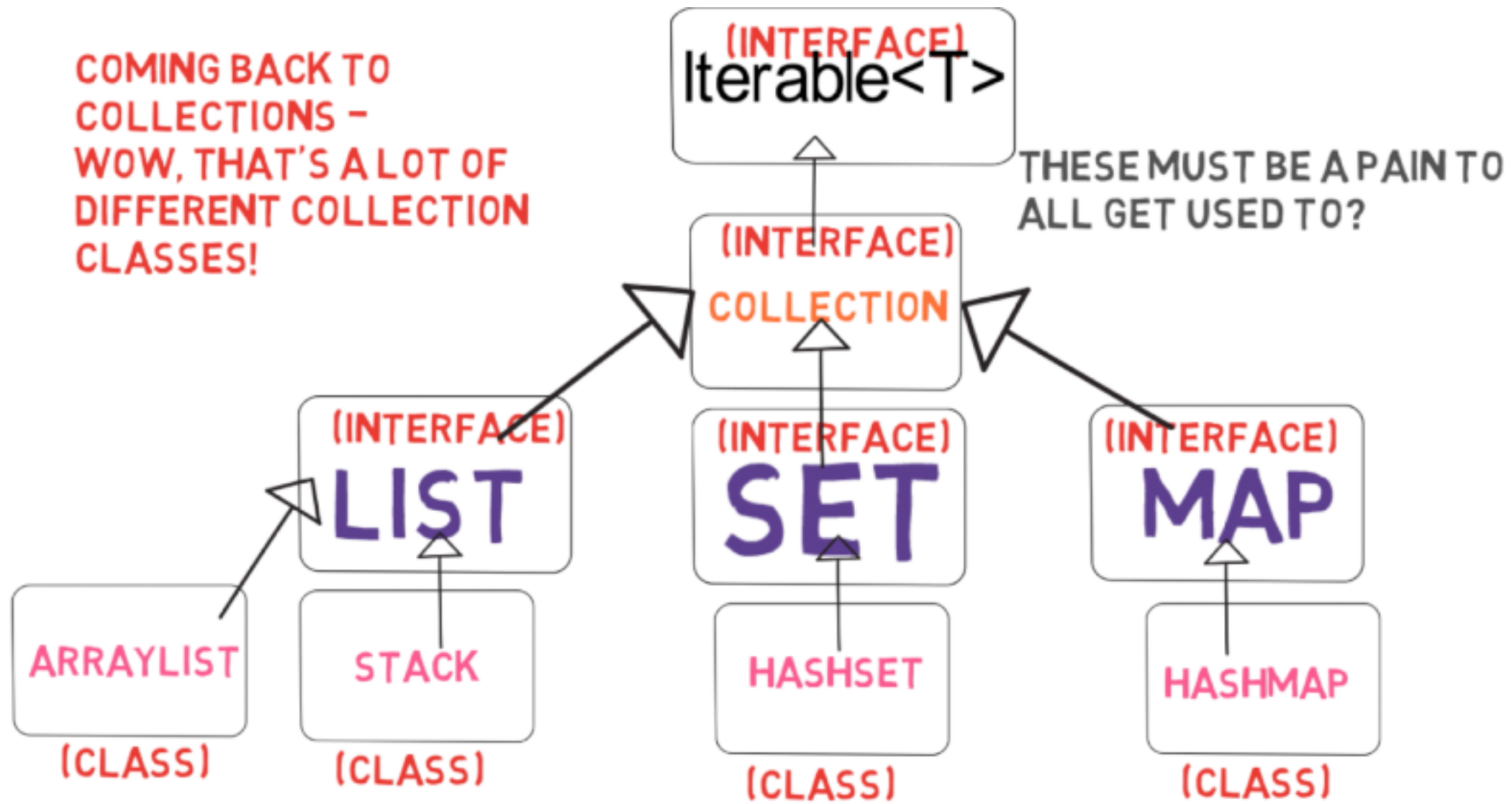
BUT IT DOES MEAN DECLARING UPFRONT  
THE TYPE OF A VARIABLE

# TYPE-SAFETY FOR COLLECTIONS

COLLECTIONS – LISTS, MAPS, SETS – SATISFY  
JAVA TYPE SAFETY RULES VIA

## GENERIC

COMING BACK TO  
COLLECTIONS -  
WOW, THAT'S A LOT OF  
DIFFERENT COLLECTION  
CLASSES!



ACTUALLY NOT, BECAUSE THERE IS A  
UNIFORM AND INTUITIVE WAY TO WORK  
WITH THEM ALL.

IT INVOLVES

# THE ITERATOR PATTERN

EVERY JAVA COLLECTION IMPLEMENTS  
THE INTERFACE

`Iterable<T>`

THIS INTERFACE HAS A SINGLE  
METHOD

`Iterator iterator()`

IN OTHER WORDS, EVERY JAVA COLLECTION  
OFFERS A WAY TO GET A CORRESPONDING

## ITERATOR OBJECT