Generics :   'a →   Set <E>

Remember   List <Object> is <u>not</u> supertype of List <String>

Java Collections

Collection <E>   ← common interface   Map <K,V>

List <E> Deque <E>   Set <E>

→ size, isEmpty, add, contains, remove
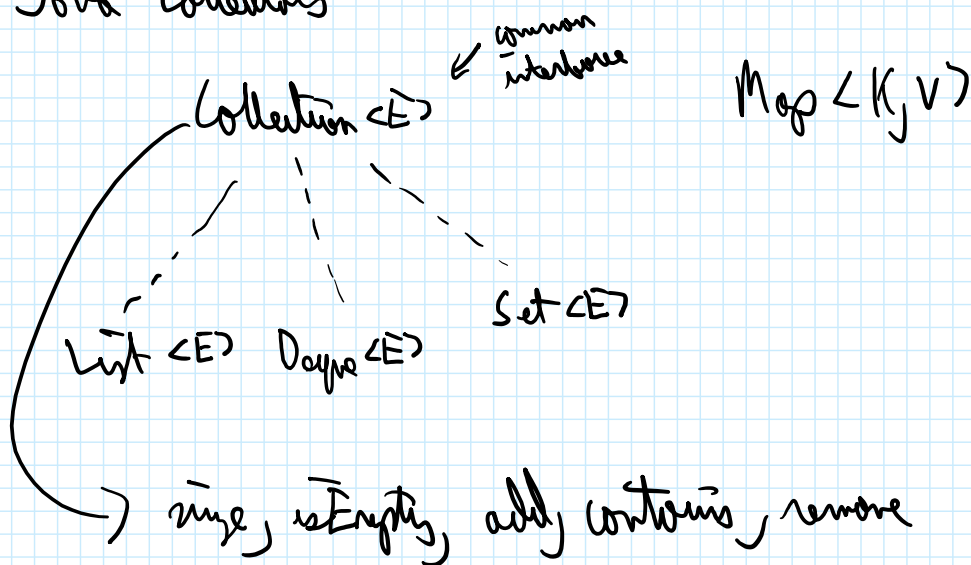
Iterable (extended by collections)
  — hasNext()
  — while (iter.hasNext())

  — for each loop
    — for (int x : intList)

— overriding methods for inheritance
  — often override equals method
  — overloading vico overriding

    — check its comparing object is null
    — if its an instance to perform a dynamic cast
    — check custom equals
      — can use super.equals instead of rewriting certain code

Exceptions
- object that can be created
- throw an exception
- catch using try catch
  - if not caught, error propagates upward
- finally, code executes whether error caught or not
- if a method could throw an exception, include in declaration (throws clause)

IO
- input/output streams
- read/write
- @ buffering is more efficient generally

Swing
- invoke later
- runnable
- J component
  - create a panel } add to a J frame
- Action listener
  - add to a button
- using a layout manager
- inner classes, classes contain activities
- Anonymous inner classes in first order function