Class **ArrayList**

a0		
0	a1	ArrayList
1	a4	
2	a2	
. . .		
364	a9	

a1
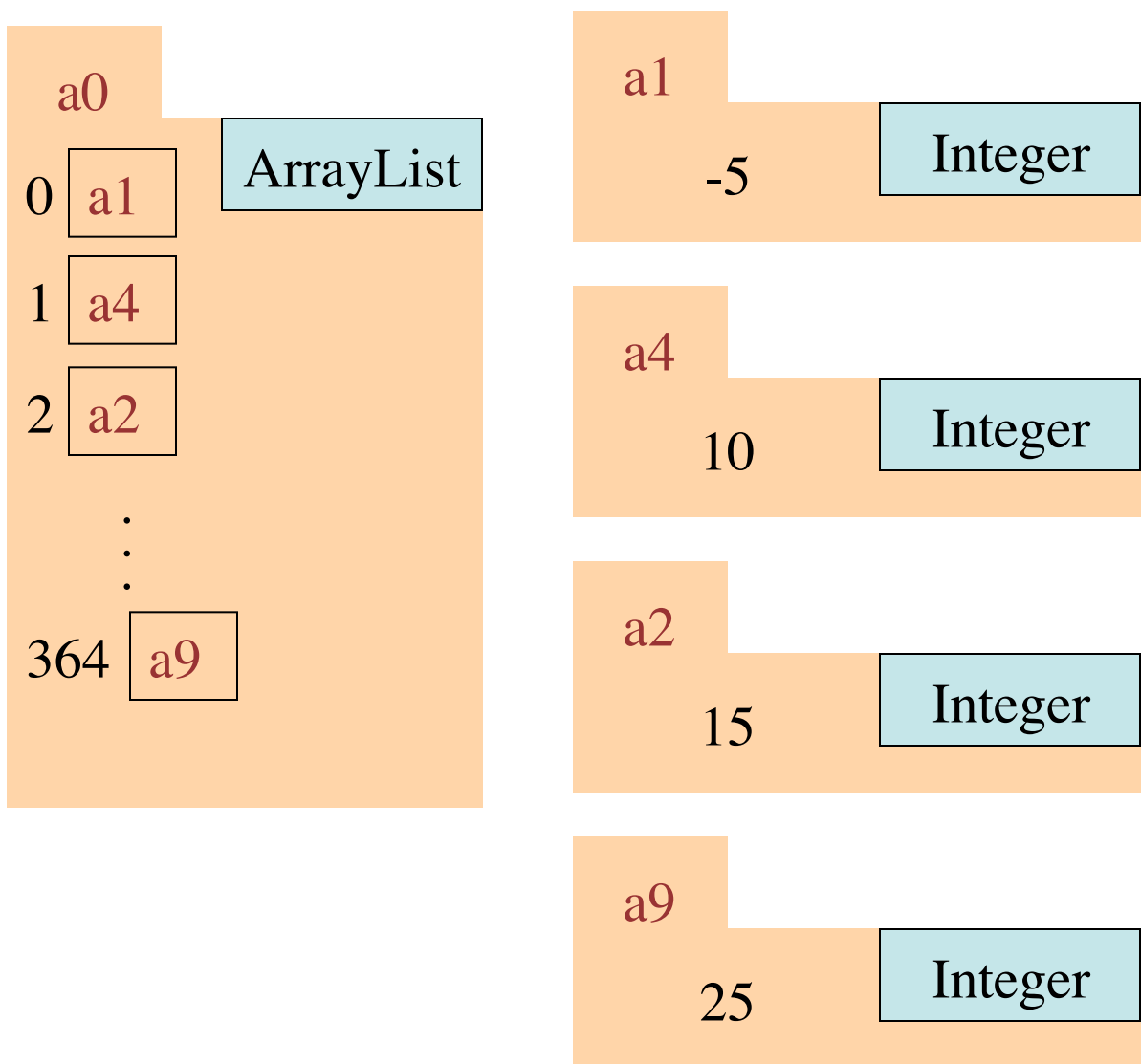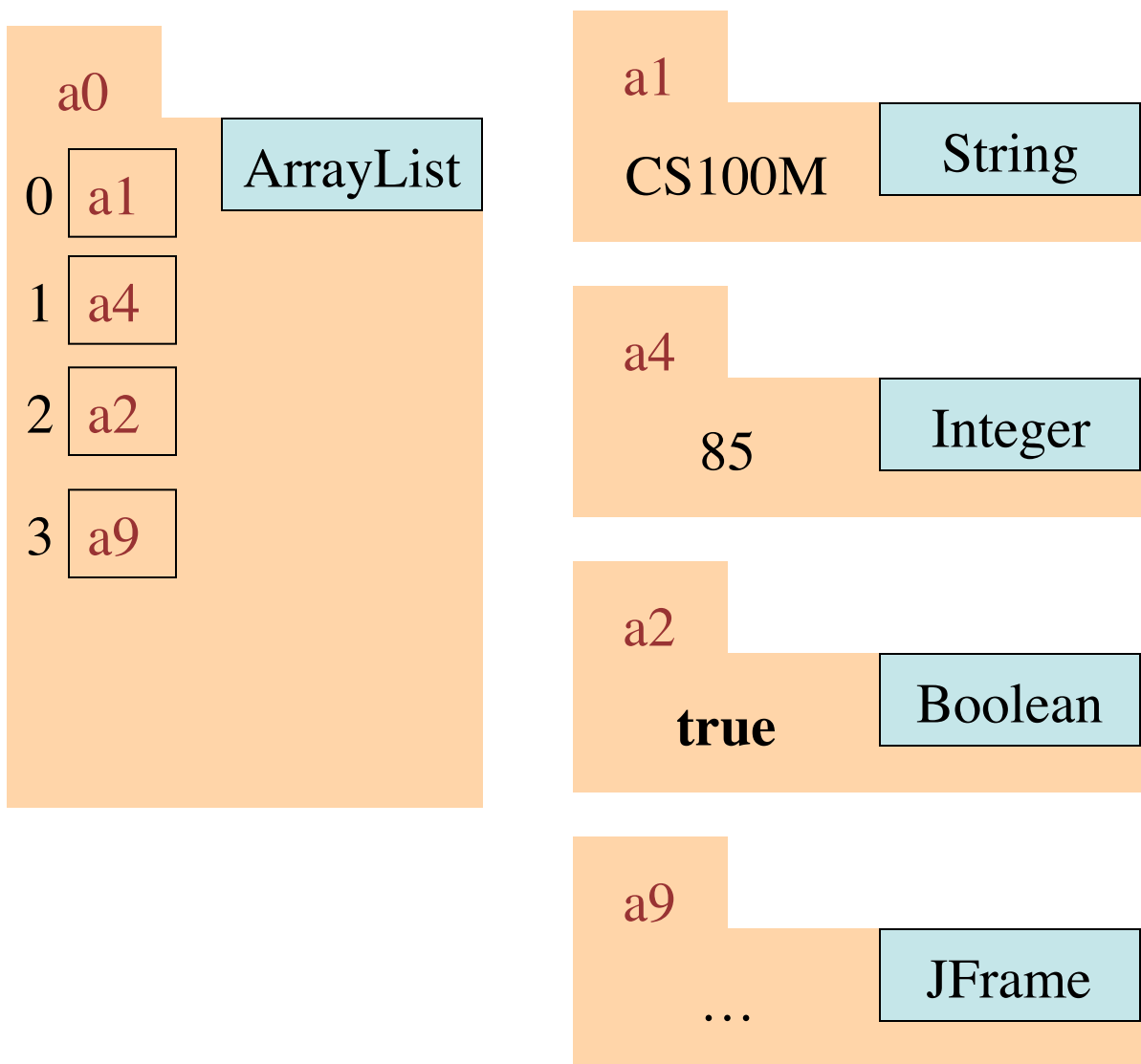-5   Integer

a4
10   Integer

a2
15   Integer

a9
25   Integer

An instance contains a list of objects.
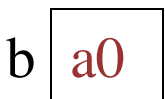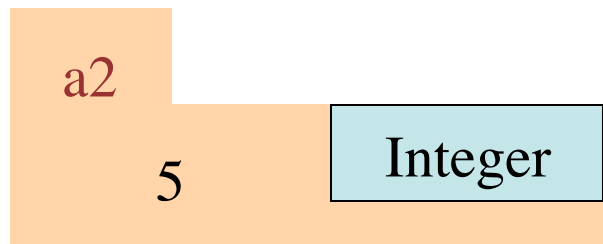
ArrayList is in package java.util.

Class **ArrayList**

a0

0	a1
1	a4
2	a2
3	a9

ArrayList

a1

CS100M → String

a4

85 → Integer

a2

true → Boolean

a9

… → JFrame
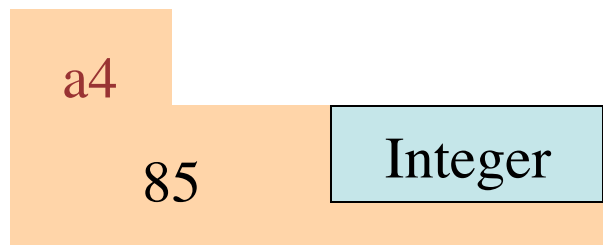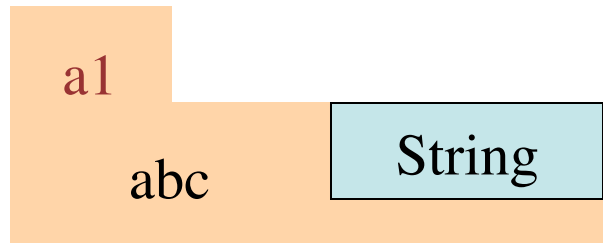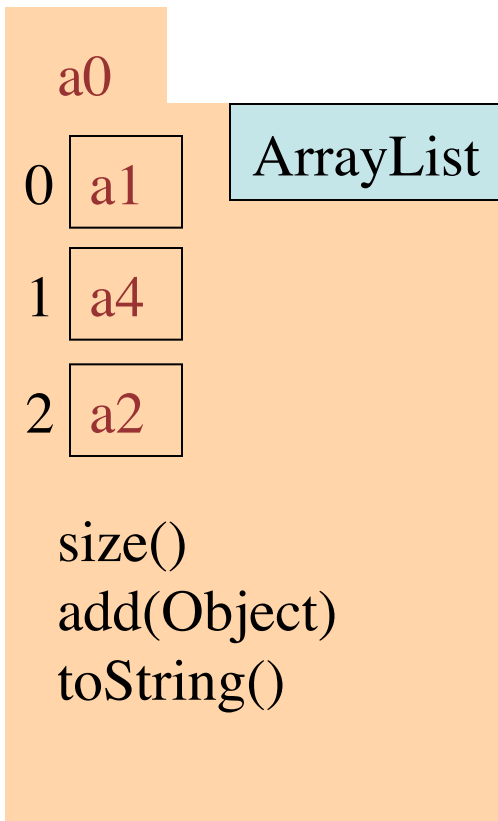
An instance contains a list of objects.

ArrayList is in package java.util.

Adding objects to an ArrayList

a0

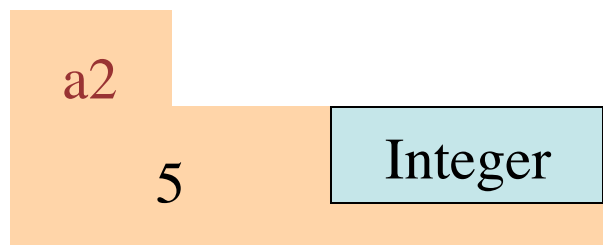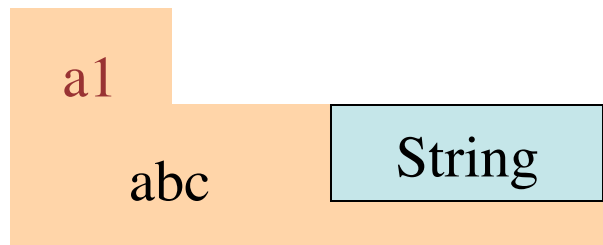|	
	ArrayList
0	a1
1	a4
2	a2

size()
add(Object)
toString()

b | a0

When first created, the size of the list is 0.

b.size() = the number of objects in the list.

a1

abc   String

a4

85   Integer

a2

5   Integer

ArrayList is in package java.util.

Inserting an element

a0

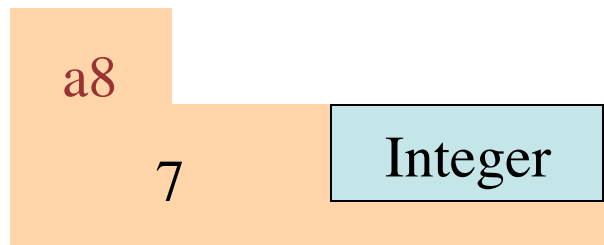|	
0	a1
1	a8
2	a4
3	a2

ArrayList

size()
toString()

add(Object)
add (**int**, Object)
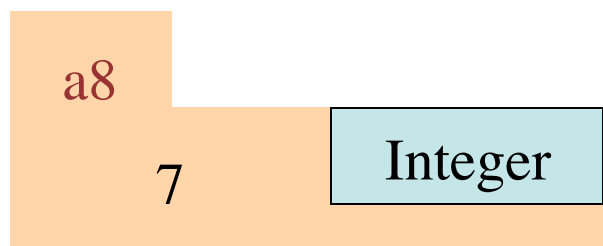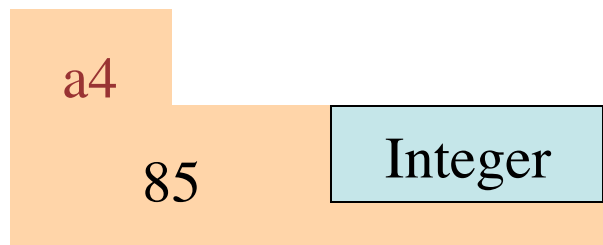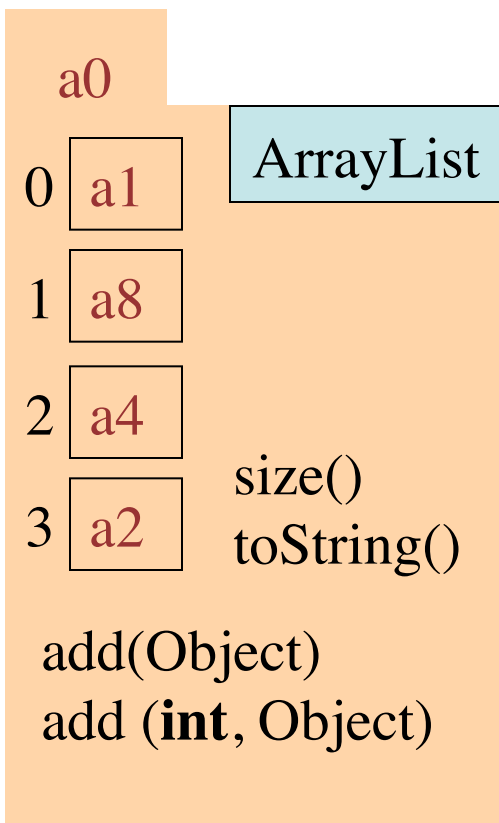
b | a0

Inserting an element at a position takes time proportional to the number of elements that have to be shifted down.

a1

abc

String

a4

85

Integer

a2

5

Integer

a8

7

Integer

Retrieving an element

a0

0	a1
1	a8
2	a4
3	a2

ArrayList

size()
toString()

add(Object)
add (**int**, Object)
get(**int**)
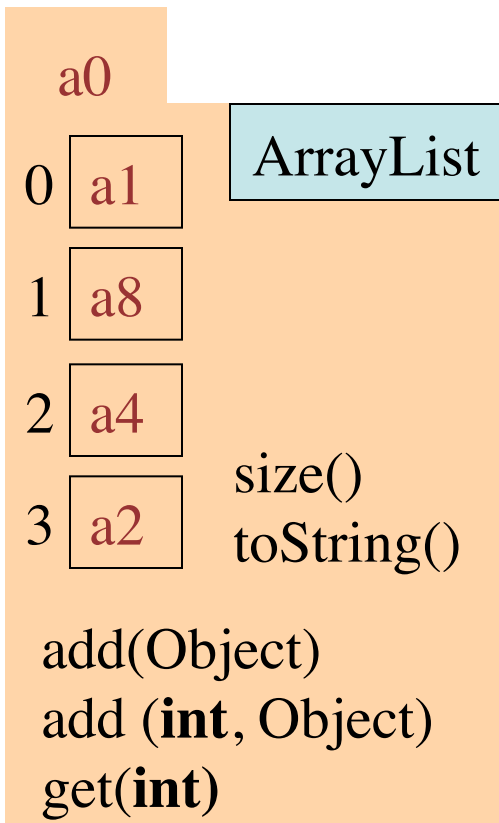
b.get(k) = the name of the
object at position k

a1

abc   String

a4

85   Integer

a2

5   Integer

a8

7   Integer

b | a0
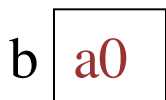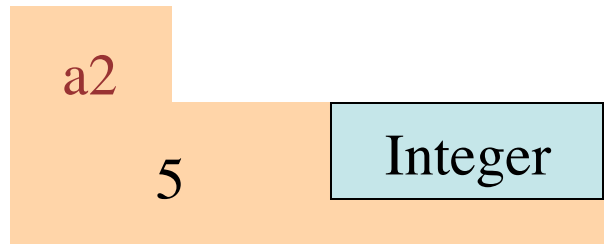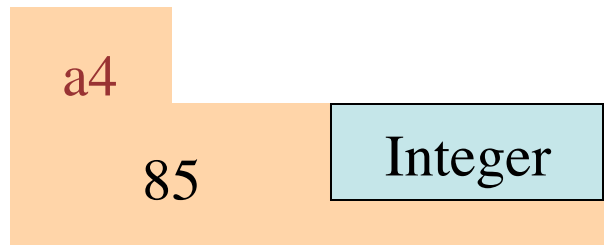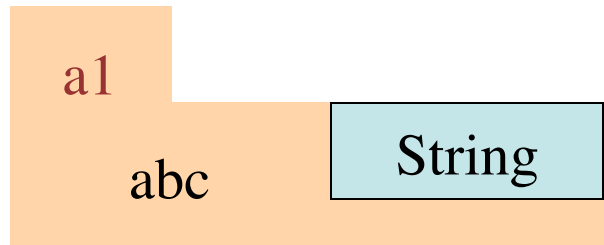
b.get(2) = a4

ArrayList is in package java.util.

Setting an element

a0

ArrayList

0	a1
1	a8
2	a6
3	a2

size()
toString()

add(Object)
add (**int**, Object)
get(**int)**

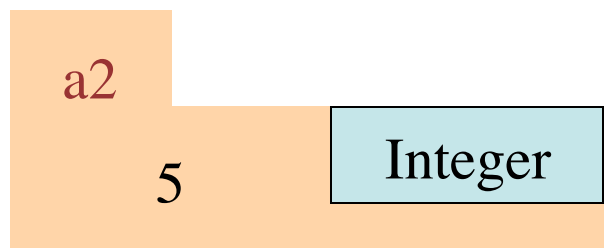b.set(2, **true**) changes the element at position 2 to a wrapped **true** and returns the object previously at position 2.

a1

abc   String

a4

85   Integer

b a0

a2

5   Integer

a6

true   Boolean

a8

7   Integer
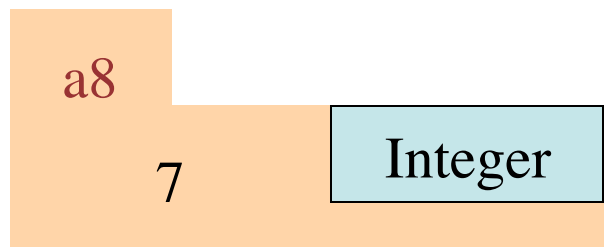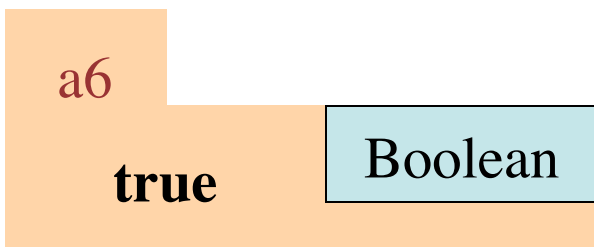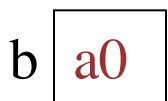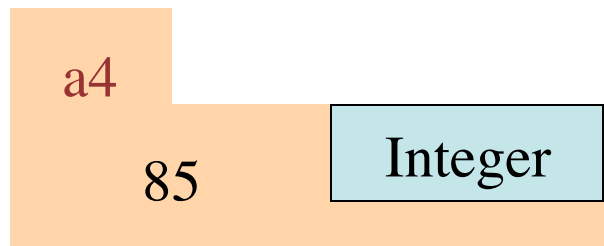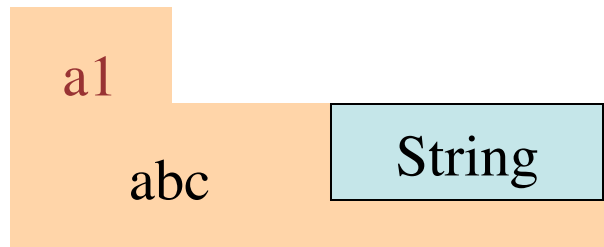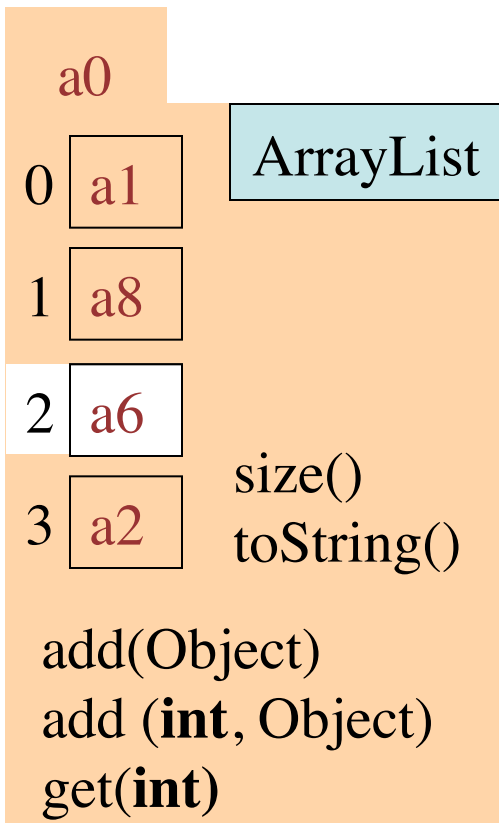
Setting an element

b.remove(1) removes the object at position 1 of the list.

a0

0 | a1
1 | a6
2 | a2

ArrayList

size()
toString()

add(Object)
add (**int**, Object)
get(**int)**

b | a0

a1

abc

String

a4

85

Integer

a2

5

Integer

a6

true

Boolean

a8

7

Integer