Testing the array-based IndexList:

java.lang.IndexOutOfBoundsException: add: Invalid index = 1

-- adding value 435 at position 0

\*\*\* The 1 elements in the list are:

--Element in position 0 is: 435

The capacity of the list is 1

-- adding value 200 at position 1

\*\*\* The 2 elements in the list are:

--Element in position 0 is: 435

--Element in position 1 is: 200

The capacity of the list is 2

\*\*\* The 10 elements in the list are:

--Element in position 0 is: 435

--Element in position 1 is: 200

--Element in position 2 is: 435

--Element in position 3 is: 200

--Element in position 4 is: 20

--Element in position 5 is: 25

--Element in position 6 is: 30

--Element in position 7 is: 35

--Element in position 8 is: 40

--Element in position 9 is: 45

The capacity of the list is 10

-- adding value 100 at position 90

java.lang.IndexOutOfBoundsException: add: Invalid index = 90

-- adding value -1 at position 90

java.lang.IndexOutOfBoundsException: add: Invalid index = 90

-- deleting element at position 100

java.lang.IndexOutOfBoundsException: get: Invalid index = 100

-- deleting element at position -1

java.lang.IndexOutOfBoundsException: get: Invalid index = -1

-- replacing value at position 100 by 0

java.lang.IndexOutOfBoundsException: get: Invalid index = 100

-- replacing value at position -1 by 0

java.lang.IndexOutOfBoundsException: get: Invalid index = -1

-- deleting element at position 4

-- value of deleted element was 20

\*\*\* The 9 elements in the list are:

--Element in position 0 is: 435

--Element in position 1 is: 200

--Element in position 2 is: 435

--Element in position 3 is: 200

--Element in position 4 is: 25

--Element in position 5 is: 30

--Element in position 6 is: 35

--Element in position 7 is: 40

--Element in position 8 is: 45

The capacity of the list is 10

-- deleting element at position 2

-- value of deleted element was 435

\*\*\* The 8 elements in the list are:

--Element in position 0 is: 435

--Element in position 1 is: 200

--Element in position 2 is: 200

--Element in position 3 is: 25

--Element in position 4 is: 30

--Element in position 5 is: 35

--Element in position 6 is: 40

--Element in position 7 is: 45

The capacity of the list is 10

-- deleting element at position 30

java.lang.IndexOutOfBoundsException: get: Invalid index = 30

-- replacing value at position 3 by 400

-- value of replaced element was 25

\*\*\* The 8 elements in the list are:

--Element in position 0 is: 435

--Element in position 1 is: 200

--Element in position 2 is: 200

--Element in position 3 is: 400

--Element in position 4 is: 30

--Element in position 5 is: 35

--Element in position 6 is: 40

--Element in position 7 is: 45

The capacity of the list is 10

-- replacing value at position 0 by 30

-- value of replaced element was 435

\*\*\* The 8 elements in the list are: --Element in position 0 is: 30

--Element in position 1 is: 200

--Element in position 2 is: 200

--Element in position 3 is: 400

--Element in position 4 is: 30

--Element in position 5 is: 35

--Element in position 6 is: 40

--Element in position 7 is: 45

The capacity of the list is 10

-- adding value 700 at position 3

\*\*\* The 9 elements in the list are:

--Element in position 0 is: 30

--Element in position 1 is: 200

--Element in position 2 is: 200

--Element in position 3 is: 700

--Element in position 4 is: 400

--Element in position 5 is: 30

--Element in position 6 is: 35

--Element in position 7 is: 40

--Element in position 8 is: 45

The capacity of the list is 10

-- deleting element at position 8

-- value of deleted element was 45

\*\*\* The 8 elements in the list are:

--Element in position 0 is: 30

--Element in position 1 is: 200

--Element in position 2 is: 200

--Element in position 3 is: 700

--Element in position 4 is: 400

--Element in position 5 is: 30

--Element in position 6 is: 35

--Element in position 7 is: 40

The capacity of the list is 10

-- deleting element at position 0

-- value of deleted element was 30

\*\*\* The 7 elements in the list are:

--Element in position 0 is: 200

--Element in position 1 is: 200

--Element in position 2 is: 700

--Element in position 3 is: 400

--Element in position 4 is: 30

--Element in position 5 is: 35

--Element in position 6 is: 40

The capacity of the list is 9

-- deleting element at position 6

-- value of deleted element was 40

\*\*\* The 6 elements in the list are:

--Element in position 0 is: 200

--Element in position 1 is: 200

--Element in position 2 is: 700

--Element in position 3 is: 400

--Element in position 4 is: 30

--Element in position 5 is: 35

The capacity of the list is 8

-- deleting element at position 0

-- value of deleted element was 200

\*\*\* The 5 elements in the list are: --Element in position 0 is: 200

--Element in position 1 is: 700

--Element in position 2 is: 400

--Element in position 3 is: 30

--Element in position 4 is: 35

The capacity of the list is 7

-- deleting element at position 4

-- value of deleted element was 35

\*\*\* The 4 elements in the list are: --Element in position 0 is: 200

--Element in position 1 is: 700

--Element in position 2 is: 400

--Element in position 3 is: 30

The capacity of the list is 6

-- deleting element at position 0

-- value of deleted element was 200

\*\*\* The 3 elements in the list are: --Element in position 0 is: 700

--Element in position 1 is: 400

--Element in position 2 is: 30

The capacity of the list is 5

-- deleting element at position 2

-- value of deleted element was 30

\*\*\* The 2 elements in the list are: --Element in position 0 is: 700

--Element in position 1 is: 400

The capacity of the list is 4

-- deleting element at position 0

-- value of deleted element was 700

\*\*\* The 1 elements in the list are:

--Element in position 0 is: 400

The capacity of the list is 3

-- deleting element at position 0

-- value of deleted element was 400

\*\*\* The 0 elements in the list are:

The capacity of the list is 2

-- deleting element at position 0

java.lang.IndexOutOfBoundsException: get: Invalid index = 0

adding value 700 at position 0

\*\*\* The 1 elements in the list are:

--Element in position 0 is: 700

The capacity of the list is 2

-- adding value 800 at position 1

\*\*\* The 2 elements in the list are:

--Element in position 0 is: 700

--Element in position 1 is: 800

The capacity of the list is 2

-- adding value 900 at position 2

\*\*\* The 3 elements in the list are:

--Element in position 0 is: 700

--Element in position 1 is: 800

--Element in position 2 is: 900

The capacity of the list is 3

-- adding value 1000 at position 2

\*\*\* The 4 elements in the list are: --Element in position 0 is: 700

--Element in position 1 is: 800

--Element in position 2 is: 1000

--Element in position 3 is: 900

The capacity of the list is 4

-- adding value 1001 at position 1

\*\*\* The 5 elements in the list are:

--Element in position 0 is: 700

--Element in position 1 is: 1001 --Element in position 2 is: 800

--Element in position 3 is: 1000

--Element in position 4 is: 900

The capacity of the list is 5

-- adding value 1002 at position 3

\*\*\* The 6 elements in the list are:

--Element in position 0 is: 700

--Element in position 1 is: 1001 --Element in position 2 is: 800

--Element in position 3 is: 1002

--Element in position 4 is: 1000

--Element in position 5 is: 900

The capacity of the list is 6

-- adding value 700 at position 3

\*\*\* The 7 elements in the list are:

--Element in position 0 is: 700

--Element in position 1 is: 1001

--Element in position 2 is: 800

--Element in position 3 is: 700

--Element in position 4 is: 1002

--Element in position 5 is: 1000

--Element in position 6 is: 900

The capacity of the list is 7

-- adding value 800 at position 1

\*\*\* The 8 elements in the list are:

--Element in position 0 is: 700

--Element in position 1 is: 800

--Element in position 2 is: 1001

Element in position 3 is: 800 --Element in position 4 is: 700

--Element in position 5 is: 1002

--Element in position 6 is: 1000

--Element in position 7 is: 900

The capacity of the list is 8

-- adding value 900 at position 2

\*\*\* The 9 elements in the list are:

--Element in position 0 is: 700

--Element in position 1 is: 800

--Element in position 2 is: 900

--Element in position 3 is: 1001

--Element in position 4 is: 800

--Element in position 5 is: 700

--Element in position 6 is: 1002

--Element in position 7 is: 1000

--Element in position 8 is: 900

The capacity of the list is 9

-- adding value 1000 at position 2

\*\*\* The 10 elements in the list are:

--Element in position 0 is: 700

--Element in position 1 is: 800

--Element in position 2 is: 1000 --Element in position 3 is: 900

--Element in position 4 is: 1001

--Element in position 5 is: 800

--Element in position 6 is: 700

--Element in position 7 is: 1002

--Element in position 8 is: 1000

--Element in position 9 is: 900

The capacity of the list is 10

-- adding value 1001 at position 1

\*\*\* The 11 elements in the list are: --Element in position 0 is: 700

--Element in position 1 is: 1001 --Element in position 2 is: 800

--Element in position 3 is: 1000 --Element in position 4 is: 900

--Element in position 5 is: 1001

--Element in position 6 is: 800

--Element in position 7 is: 700

--Element in position 8 is: 1002

--Element in position 9 is: 1000

--Element in position 10 is: 900

The capacity of the list is 11

-- adding value 1002 at position 3

\*\*\* The 12 elements in the list are:

--Element in position 0 is: 700

--Element in position 1 is: 1001 --Element in position 2 is: 800

--Element in position 3 is: 1002

--Element in position 4 is: 1000 --Element in position 5 is: 900

--Element in position 6 is: 1001

--Element in position 7 is: 800

--Element in position 8 is: 700

--Element in position 9 is: 1002

--Element in position 10 is: 1000

--Element in position 11 is: 900

The capacity of the list is 12

-- deleting element at position 2

-- value of deleted element was 800

\*\*\* The 11 elements in the list are:

Element in position 0 is: 700 --Element in position 1 is: 1001

--Element in position 2 is: 1002

--Element in position 3 is: 1000 --Element in position 4 is: 900

--Element in position 5 is: 1001

--Element in position 6 is: 800

--Element in position 7 is: 700

--Element in position 8 is: 1002

--Element in position 9 is: 1000

--Element in position 10 is: 900

The capacity of the list is 12

-- deleting element at position 2

-- value of deleted element was 1002

\*\*\* The 10 elements in the list are: --Element in position 0 is: 700

--Element in position 1 is: 1001

--Element in position 2 is: 1000 --Element in position 3 is: 900

--Element in position 4 is: 1001

--Element in position 5 is: 800

--Element in position 6 is: 700

--Element in position 7 is: 1002

--Element in position 8 is: 1000

--Element in position 9 is: 900

The capacity of the list is 12

-- deleting element at position 2

-- value of deleted element was 1000

\*\*\* The 9 elements in the list are: --Element in position 0 is: 700

--Element in position 1 is: 1001 --Element in position 2 is: 900

--Element in position 3 is: 1001

--Element in position 4 is: 800

--Element in position 5 is: 700

--Element in position 6 is: 1002

--Element in position 7 is: 1000

--Element in position 8 is: 900

The capacity of the list is 11

-- deleting element at position 2

-- value of deleted element was 900

\*\*\* The 8 elements in the list are:

--Element in position 0 is: 700

--Element in position 1 is: 1001

--Element in position 2 is: 1001

--Element in position 3 is: 800

--Element in position 4 is: 700

--Element in position 5 is: 1002

--Element in position 6 is: 1000

--Element in position 7 is: 900

The capacity of the list is 10

-- deleting element at position 2

-- value of deleted element was 1001

\*\*\* The 7 elements in the list are:

--Element in position 0 is: 700

--Element in position 1 is: 1001

--Element in position 2 is: 800

--Element in position 3 is: 700

--Element in position 4 is: 1002

--Element in position 5 is: 1000

--Element in position 6 is: 900

The capacity of the list is 9