M3: Hands-On: Dynamic Array Resizing

Due Feb 26 at 11:59pm **Points** 1 **Questions** 1 **Time Limit** None
Allowed Attempts Unlimited

Instructions

- `ArrayIterator.java`
- `ArrayBagClient.java`

Note: This activity utilizes jGRASP Viewers, which are available in jGRASP, IntelliJ, and Eclipse.

Dynamic Resizing

1. Open `ArrayBagClient.java`, then compile and run it. Observe the output to understand what the `main` method is doing.
2. Use breakpoints, the debugger, and jGRASP viewers to observe the array being resized as elements are added to the `ArrayBag` object.
3. Modify the `ArrayBagClient` so that elements are both added and removed from the `ArrayBag` object. Then, use breakpoints, the debugger, and jGRASP viewers to observe the array being resized.
4. Continue to experiment with the `ArrayBagClient` until you are confident that you understand the array resizing behavior.

Submission

The submission page for this activity asks you to apply your understanding of dynamic array resizing to a problem and then submit it for a grade.

Take the Quiz Again

Attempt History

	Attempt	Time	Score
KEPT	Attempt 3	less than 1 minute	1 out of 1
LATEST	Attempt 3	less than 1 minute	1 out of 1
	Attempt 2	6 minutes	0 out of 1
	Attempt 1	less than 1 minute	0 out of 1

ⓘ Correct answers are hidden.

Score for this attempt: **1** out of 1

Submitted Feb 24 at 8:18pm

This attempt took less than 1 minute.

Question 1

1 / 1 pts

Consider the object `b` below, an instance of the `ArrayBag` class discussed in lecture and illustrated in lab. Recall that the `ArrayBag` uses an array as the physical storage structure and uses the *dynamic resizing* strategy exactly as we discussed in class. Assuming the array begins with capacity 1, what will the **capacity** (i.e., length) of the array be after the following sequence of statements are executed?

```
ArrayBag b = new ArrayBag();
for (int i = 1; i <= 18; i++) {
   b.add(i);
}
for (int i = 1; i <= 15; i++) {
   b.remove(i);
}
```

A. 4

B. 8

C. 16

D. 32

○ A

- B
- C
- D

Quiz Score: **1** out of 1