Peer Instruction 12

Collections and ArrayLists

What are the size of the ArrayList after the following code executes?

```
ArrayList<String> list = new ArrayList<>(10);
list.add("Java");
list.add("Basic");
list.add("C++");
list.add(2, "Python");
list.add(3, "Fortran");
list.remove("Java");
list.trimToSize();
```

size, capacity:

A. 4, 4
B. 4, 10
C. 10, 4
D. 10, 10

ArrayList Example

What are the size of the ArrayList after the following code executes?

```
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list.remove("Java");
list.trimToSize();
```

size, capacity:

A. ~~4, 4~~
B. 4, 10
C. 10, 4
D. 10, 10

ArrayList Example

What is the contents of theArrayList after the following code executes?

```
ArrayList<String> list = new ArrayList<>();
list.add("Java");
list.add("Basic");
list.add("C++");
list.add(2, "Python");
list.add(3, "Fortran");
list.remove(1);
```

A. [Java, Basic, Python, Fortran, C++]
B. [Java, Python, C++, Fortran]
C. [Basic, Python, Fortran, C++]
D. [Java, Python, Fortran, C++]

ArrayList Examples

What is the contents of theArrayList after the following code executes?

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list.remove(1);
```

A. [Java, Basic, Python, Fortran, C++]
B. [Java, Python, C++, Fortran]
C. [Basic, Python, Fortran, C++]
D. [Java, Python, Fortran, C++]

ArrayList Examples

Select the statement that best defines an ArrayList.

A. ArrayList is an interface that provides a set of methods to concrete classes such as LinkedList.
B. ArrayList is a concrete class provided by Java that implements a data structure and associated methods.
C. ArrayList is a better data structure than an array because it is more efficient in terms of memory usage.
D. ArrayList is a data structure that represents a list of primitives or objects stored in memory.

ArrayList Definition

Select the statement that best defines an ArrayList.

A. ArrayList is an interface that provides a set of methods to concrete classes such as LinkedList.
B. ArrayList is a concrete class provided by Java that implements a data structure and associated methods.
C. ArrayList is a better data structure than an array because it is more efficient in terms of memory usage.
D. ArrayList is a data structure that represents a list of primitives or objects stored in memory.

ArrayList Definition

Select the statement that best describes the attributes of an ArrayList.

A. An ArrayList can grow or shrink dynamically if the programmer explicitly modifies the capacity.
B. An ArrayList can grow or shrink dynamically without any limitations or special action by the programmer.
C. An ArrayList can grow or shrink dynamically, but an element can only be added at the beginning or end.
D. An ArrayList cannot grow or shrink dynamically, it must be defined by the programmer.

ArrayList Attributes

Select the statement that best describes the attributes of an ArrayList.

A. An ArrayList can grow or shrink dynamically if the programmer explicitly modifies the capacity.
B. An ArrayList can grow or shrink dynamically without any limitations or special action by the programmer.
C. An ArrayList can grow or shrink dynamically, but an element can only be added at the beginning or end.
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ArrayList Attributes