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

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

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

---

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

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

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

---

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.
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.

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.

On to the lecture

Interfaces

• Writing an interface requires you to specify the methods a class implementing the interface does not need to address.

A. True
B. False

Interfaces

• It is possible to write an interface to specify the methods a class implementing the interface does not need to address.

A. True
B. False – any signatures not implemented cause a compile error.
Interfaces

• We can create an array of an interface type, and store the reference to an object implementing that interface as:
  A. Its type
  B. Its index
  C. An element in the array
  D. A reference to the array