Tech Mahindra

Java – Learn From Home

Quiz – Chapter 6

1. Which interface provides the capability to store objects using a key-value pair?

   A. Java.util.Map

   B. Java.util.Set

   C. Java.util.List

   D. Java.util.Collection

   Answer: Option A

   Explanation:
   An object that maps keys to values. A map cannot contain duplicate keys; each key can map to at most one value.

2. Which collection class allows you to grow or shrink its size and provides indexed access to its elements, but whose methods are not synchronized?

   A. java.util.HashSet

   B. java.util.LinkedHashSet

   C. java.util.List

   D. java.util.ArrayList

   Answer: Option D

   Explanation:
   All of the collection classes allow you to grow or shrink the size of your collection. ArrayList provides an index to its elements. The newer collection classes tend not to have synchronized methods. Vector is an older implementation of ArrayList functionality and has synchronized methods; it is slower than ArrayList

3. You need to store elements in a collection that guarantees that no duplicates are stored and all elements can be accessed in natural order. Which interface provides that capability?

A. java.util.Map

B. java.util.Set

C. java.util.List

D. java.util.Collection

Answer: Option B

Explanation:
Option B is correct. A set is a collection that contains no duplicate elements. The iterator returns the elements in no particular order (unless this set is an instance of some class that provides a guarantee). A map cannot contain duplicate keys but it may contain duplicate values. List and Collection allow duplicate elements.
Option A is wrong. A map is an object that maps keys to values. A map cannot contain duplicate keys; each key can map to at most one value. The Map interface provides three collection views, which allow a map's contents to be viewed as a set of keys, collection of values, or set of key-value mappings. The order of a map is defined as the order in which the iterators on the map's collection views return their elements. Some map implementations, like the TreeMap class, make specific guarantees as to their order (ascending key order); others, like theHashMap class, do not (does not guarantee that the order will remain constant over time).
Option C is wrong. A list is an ordered collection (also known as a sequence). The user of this interface has precise control over where in the list each element is inserted. The user can access elements by their integer index (position in the list), and search for elements in the list. Unlike sets, lists typically allow duplicate elements.
Option D is wrong. A collection is also known as a sequence. The user of this interface has precise control over where in the list each element is inserted. The user can access elements by their integer index (position in the list), and search for elements in the list. Unlike sets, lists typically allow duplicate elements

Which interface does java.util.Hashtable implement?

4.

A. Java.util.Map

B. Java.util.List

C. Java.util.HashTable

D. Java.util.Collection

Answer: Option A

Explanation:
Hash table based implementation of the Map interface.

5. Which statement is true for the class java.util.HashSet?

A. The elements in the collection are ordered.

B. The collection is guaranteed to be immutable.

C. The elements in the collection are guaranteed to be unique.

D. The elements in the collection are accessed using a unique key.

Answer: Option C

Explanation:
Option C is correct. HashSet implements the Set interface and the Set interface specifies collection that contains no duplicate elements.
Option A is wrong. HashSet makes no guarantees as to the iteration order of the set; in particular, it does not guarantee that the order will remain constant over time.
Option B is wrong. The set can be modified.
Option D is wrong. This is a Set and not a Map.

6. Which of the following are true statements?
The Iterator interface declares only three methods: hasNext, next and remove.
The ListIterator interface extends both the List and Iterator interfaces.
The ListIterator interface provides forward and backward iteration capabilities.
The ListIterator interface provides the ability to modify the List during iteration.
The ListIterator interface provides the ability to determine its position in the List.

A. 2, 3, 4 and 5

B. 1, 3, 4 and 5

C. 3, 4 and 5

D. 1, 2 and 3

Answer: Option B

Explanation:
The ListIterator interface extends the Iterator interface and declares additional methods to provide forward and backward iteration capabilities, List modification capabilities, and the ability to determine the position of the iterator in the List.

7. Which statement is true for the class java.util.ArrayList?

A. The elements in the collection are ordered.

B. The collection is guaranteed to be immutable.

C. The elements in the collection are guaranteed to be unique.

D. The elements in the collection are accessed using a unique key.

Answer: Option A

Explanation:
Yes, always the elements in the collection are ordered

8. Which of these interface is not a part of Java's collection framework?

A. List
B. Set
C. SortedMap
D. SortedList
Answer: Option D

Explanation:
SortedList is not a part of collection framework

9. Which of these methods deletes all the elements from invoking collection?

A. clear()
B. reset()
C. delete()
D. refresh()

Answer: Option A

Explanation:
clear() method removes all the elements from invoking collection.

10. What is Collection in Java?

A. A group of objects
B. A group of classes
C. A group of interfaces
D. None of the mentioned
Answer: Option A

Explanation:
A collection is a group of objects, it is similar to String Template Library (STL) of C++ programming language