1. **What are the predefined functions in collection in java?**

|  |  |
| --- | --- |
| **Methods** | **Description** |
| [addAll(Collection<? extends E> c)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-addall-method-in-java-with-examples/&sa=U&ved=2ahUKEwjKuPOa-NnsAhWF6XMBHV52Bxg4ChAWMAV6BAgGEAI&usg=AOvVaw0xyjH8UBNWNsFmLyTyUlZk) | It is used to insert the specified collection elements in the invoking collection. |
| [asLifoQueue​(Deque<T> deque)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-aslifoqueue-method-in-java-with-examples/&sa=U&ved=2ahUKEwjR2pzb-NnsAhXB63MBHfsmCzQ4HhAWMAR6BAgEEAI&usg=AOvVaw0cqoFANseci3YfUQzT91qJ) | This method returns a view of a Deque as a Last-in-first-out (Lifo) Queue. |
| [binarySearch(List<? extends Comparable> list, T key)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-binarysearch-java-examples/&sa=U&ved=2ahUKEwi6uP_199nsAhXj73MBHZbDDPMQFjAJegQIBRAC&usg=AOvVaw3Z6NwOyP0de-c-hRasRUsf) | This method searches the key using binary search in the specified list. |
| [binarySearch​(List<? extends T> list, T key, Comparator<? super T> c)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-binarysearch-java-examples/&sa=U&ved=2ahUKEwi6uP_199nsAhXj73MBHZbDDPMQFjAJegQIBRAC&usg=AOvVaw3Z6NwOyP0de-c-hRasRUsf) | This method searches the specified list for the specified object using the binary search algorithm. |
| [checkedCollection​(Collection<E> c, Class<E> type)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-checkedcollection-method-in-java-with-examples/&sa=U&ved=2ahUKEwjR2pzb-NnsAhXB63MBHfsmCzQ4HhAWMAJ6BAgJEAI&usg=AOvVaw1gjbCCS3zLq1m9WpQf0BAH) | This method returns a dynamically typesafe view of the specified collection. |
| checkedList​(List<E> list, Class<E> type) | This method returns a dynamically typesafe view of the specified list. |
| checkedMap​(Map<K,​V> m, Class<K> keyType, Class<V> valueType) | This method returns a dynamically typesafe view of the specified map. |
| checkedNavigableMap​(NavigableMap<K,​V> m, Class<K> keyType, Class<V> valueType) | This method returns a dynamically typesafe view of the specified navigable map. |
| checkedNavigableSet​(NavigableSet<E> s, Class<E> type) | This method returns a dynamically typesafe view of the specified navigable set. |
| checkedQueue​(Queue<E> queue, Class<E> type) | This method returns a dynamically typesafe view of the specified queue. |
| checkedSet​(Set<E> s, Class<E> type) | This method returns a dynamically typesafe view of the specified set. |
| checkedSortedMap​(SortedMap<K,​V> m, Class<K> keyType, Class<V> valueType) | This method returns a dynamically typesafe view of the specified sorted map. |
| checkedSortedSet​(SortedSet<E> s, Class<E> type) | This method returns a dynamically typesafe view of the specified sorted set. |
| [copy​(List<? super T> dest, List<? extends T> src)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-copy-method-in-java-with-examples/&sa=U&ved=2ahUKEwjJkK-8-NnsAhWe7HMBHWaOAiA4FBAWMAF6BAgHEAI&usg=AOvVaw0dFOeP7RLXpc_ORg_6Wj2U) | This method copies all of the elements from one list into another. |
| [disjoint​(Collection<?> c1, Collection<?> c2)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/java-util-collections-disjoint-method-java-examples/&sa=U&ved=2ahUKEwjKuPOa-NnsAhWF6XMBHV52Bxg4ChAWMAF6BAgIEAI&usg=AOvVaw3c8uSUuGg43wQFmZCF_Bj4) | This method returns true if the two specified collections have no elements in common. |
| emptyEnumeration() | This method returns an enumeration that has no elements. |
| emptyIterator() | This method returns an iterator that has no elements. |
| emptyList() | This method returns an empty list (immutable). |
| emptyListIterator() | This method returns a list iterator that has no elements. |
| emptyMap() | This method returns an empty map (immutable). |
| emptyNavigableMap() | This method returns an empty navigable map (immutable). |
| emptyNavigableSet() | This method returns an empty navigable set (immutable). |
| emptySet() | This method returns an empty set (immutable). |
| emptySortedMap() | This method returns an empty sorted map (immutable). |
| emptySortedSet() | This method returns an empty sorted set (immutable). |
| [enumeration​(Collection<T> c)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-enumeration-method-in-java-with-examples/&sa=U&ved=2ahUKEwjKuPOa-NnsAhWF6XMBHV52Bxg4ChAWMAl6BAgAEAI&usg=AOvVaw2zQdzpk5s0qYfnqwiTKmSC) | This method returns an enumeration over the specified collection. |
| [fill​(List<? super T> list, T obj)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-fill-method-in-java-with-examples/&sa=U&ved=2ahUKEwi2_5_3-NnsAhWCheYKHZBvD4E4MhAWMAZ6BAgGEAI&usg=AOvVaw1xqIqDpotyXSl0SNNWLwsG) | This method replaces all of the elements of the specified list with the specified element. |
| [frequency​(Collection<?> c, Object o)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/java-util-collections-frequency-java/&sa=U&ved=2ahUKEwjJkK-8-NnsAhWe7HMBHWaOAiA4FBAWMAR6BAgFEAI&usg=AOvVaw0Myrb9MDi7AANHD6aNLTCl) | This method returns the number of elements in the specified collection equal to the specified object. |
| indexOfSubList​(List<?> source, List<?> target) | This method returns the starting position of the first occurrence of the specified target list within the specified source list, or -1 if there is no such occurrence. |
| lastIndexOfSubList​(List<?> source, List<?> target) | This method returns the starting position of the last occurrence of the specified target list within the specified source list, or -1 if there is no such occurrence. |
| [list​(Enumeration<T> e)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-list-method-in-java-with-examples/&sa=U&ved=2ahUKEwjKuPOa-NnsAhWF6XMBHV52Bxg4ChAWMAB6BAgDEAI&usg=AOvVaw0y-jLp0AaKB86tfyJIDziW) | This method returns an array list containing the elements returned by the specified enumeration in the order they are returned by the enumeration. |
| [max​(Collection<? extends T> coll)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-max-method-in-java-with-examples/&sa=U&ved=2ahUKEwi6uP_199nsAhXj73MBHZbDDPMQFjAEegQIAxAC&usg=AOvVaw2qA6HgjzzeCI8AHdWdeBBA) | This method returns the maximum element of the given collection, according to the natural ordering of its elements. |
| [max​(Collection<? extends T> coll, Comparator<? super T> comp)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-max-method-in-java-with-examples/&sa=U&ved=2ahUKEwi6uP_199nsAhXj73MBHZbDDPMQFjAEegQIAxAC&usg=AOvVaw2qA6HgjzzeCI8AHdWdeBBA) | This method returns the maximum element of the given collection, according to the order induced by the specified comparator. |
| [min​(Collection<? extends T> coll)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-min-method-in-java-with-examples/&sa=U&ved=2ahUKEwi6uP_199nsAhXj73MBHZbDDPMQFjAIegQIABAC&usg=AOvVaw1-7_OhEytkSHKGWgUrm2bv) | This method returns the minimum element of the given collection, according to the natural ordering of its elements. |
| [min​(Collection<? extends T> coll, Comparator<? super T> comp)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-min-method-in-java-with-examples/&sa=U&ved=2ahUKEwi6uP_199nsAhXj73MBHZbDDPMQFjAIegQIABAC&usg=AOvVaw1-7_OhEytkSHKGWgUrm2bv) | This method returns the minimum element of the given collection, according to the order induced by the specified comparator. |
| nCopies​(int n, T o) | This method returns an immutable list consisting of n copies of the specified object. |
| newSetFromMap​(Map<E,​Boolean> map) | This method returns a set backed by the specified map. |
| replaceAll​(List<T> list, T oldVal, T newVal) | This method replaces all occurrences of one specified value in a list with another. |
| [reverse​(List<?> list)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-reverse-java-examples/&sa=U&ved=2ahUKEwjJkK-8-NnsAhWe7HMBHWaOAiA4FBAWMAJ6BAgJEAI&usg=AOvVaw3rE6jlGifup0vkoP2GQX9W) | This method reverses the order of the elements in the specified list |
| reverseOrder() | This method returns a comparator that imposes the reverse of the natural ordering on a collection of objects that implement the Comparable interface. |
| [reverseOrder​(Comparator<T> cmp)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-reverseorder-java-examples/&sa=U&ved=2ahUKEwjJkK-8-NnsAhWe7HMBHWaOAiA4FBAWMAB6BAgGEAE&usg=AOvVaw3WhEucy8Tqt4XilMMbuJX-) | This method returns a comparator that imposes the reverse ordering of the specified comparator. |
| [rotate​(List<?> list, int distance)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/java-util-collections-rotate-method-java-examples/&sa=U&ved=2ahUKEwi6uP_199nsAhXj73MBHZbDDPMQFjAFegQIBBAC&usg=AOvVaw0Xe95qWfyXw8Yex5VrDlmu) | This method rotates the elements in the specified list by the specified distance. |
| [shuffle​(List<?> list)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-shuffle-java-examples/&sa=U&ved=2ahUKEwjJkK-8-NnsAhWe7HMBHWaOAiA4FBAWMAZ6BAgDEAI&usg=AOvVaw1nrYJRpZjAKQrorR3tjl_D) | This method randomly permutes the specified list using a default source of randomness. |
| [shuffle​(List<?> list, Random rnd)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-shuffle-java-examples/&sa=U&ved=2ahUKEwjJkK-8-NnsAhWe7HMBHWaOAiA4FBAWMAZ6BAgDEAI&usg=AOvVaw1nrYJRpZjAKQrorR3tjl_D) | This method randomly permute the specified list using the specified source of randomness. |
| singletonMap​(K key, V value) | This method returns an immutable map, mapping only the specified key to the specified value. |
| [singleton​(T o)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-singleton-method-java/&sa=U&ved=2ahUKEwjR2pzb-NnsAhXB63MBHfsmCzQ4HhAWMAZ6BAgFEAI&usg=AOvVaw3_CPxwqk8yCljhuDtMnNRh) | This method returns an immutable set containing only the specified object. |
| [singletonList​(T o)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-singleton-method-java/&sa=U&ved=2ahUKEwjR2pzb-NnsAhXB63MBHfsmCzQ4HhAWMAZ6BAgFEAI&usg=AOvVaw3_CPxwqk8yCljhuDtMnNRh) | This method returns an immutable list containing only the specified object. |
| [sort​(List<T> list)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-sort-java-examples/&sa=U&ved=2ahUKEwi6uP_199nsAhXj73MBHZbDDPMQFjADegQIBxAC&usg=AOvVaw3LK6ysEznNr0ARFYCFDvYh) | This method sorts the specified list into ascending order, according to the natural ordering of its elements. |
| sort​(List<T> list, Comparator<? super T> c) | This method sorts the specified list according to the order induced by the specified comparator. |
| [swap​(List<?> list, int i, int j)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-swap-method-in-java-with-examples/&sa=U&ved=2ahUKEwi6uP_199nsAhXj73MBHZbDDPMQFjAGegQIBhAC&usg=AOvVaw0tePjZhO5Nvpl_md2ywFUR) | This method swaps the elements at the specified positions in the specified list. |
| [synchronizedCollection​(Collection<T> c)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-synchronizedcollection-method-in-java-with-examples/&sa=U&ved=2ahUKEwjJkK-8-NnsAhWe7HMBHWaOAiA4FBAWMAh6BAgEEAI&usg=AOvVaw0Fv_A894e10Pn9caVxEgW0) | This method returns a synchronized (thread-safe) collection backed by the specified collection. |
| [synchronizedList​(List<T> list)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-synchronizedlist-method-in-java-with-examples/&sa=U&ved=2ahUKEwjR2pzb-NnsAhXB63MBHfsmCzQ4HhAWMAN6BAgIEAI&usg=AOvVaw0jrt_wb0z28gyEz3mYhJQe) | This method returns a synchronized (thread-safe) list backed by the specified list. |
| synchronizedMap​(Map<K,​V> m) | This method returns a synchronized (thread-safe) map backed by the specified map. |
| synchronizedNavigableMap​(NavigableMap<K,​V> m) | This method returns a synchronized (thread-safe) navigable map backed by the specified navigable map. |
| synchronizedNavigableSet​(NavigableSet<T> s) | This method returns a synchronized (thread-safe) navigable set backed by the specified navigable set. |
| synchronizedSet​(Set<T> s) | This method returns a synchronized (thread-safe) set backed by the specified set. |
| synchronizedSortedMap​(SortedMap<K,​V> m) | This method returns a synchronized (thread-safe) sorted map backed by the specified sorted map. |
| synchronizedSortedSet​(SortedSet<T> s) | This method returns a synchronized (thread-safe) sorted set backed by the specified sorted set. |
| [unmodifiableCollection​(Collection<? extends T> c)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-unmodifiablecollection-method-in-java-with-examples/&sa=U&ved=2ahUKEwjKuPOa-NnsAhWF6XMBHV52Bxg4ChAWMAN6BAgHEAI&usg=AOvVaw0unP0-Y8nc8QwwxZOSTy-6) | This method returns an unmodifiable view of the specified collection. |
| [unmodifiableList​(List<? extends T> list)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-unmodifiablelist-method-in-java-with-examples/&sa=U&ved=2ahUKEwjR2pzb-NnsAhXB63MBHfsmCzQ4HhAWMAF6BAgHEAI&usg=AOvVaw0_6E0BcWaD1Io5J6s0_27V) | This method returns an unmodifiable view of the specified list. |
| unmodifiableNavigableMap​(NavigableMap<K,​? extends V> m) | This method returns an unmodifiable view of the specified navigable map. |
| unmodifiableNavigableSet​(NavigableSet<T> s) | This method returns an unmodifiable view of the specified navigable set. |
| [unmodifiableSet​(Set<? extends T> s)](https://www.google.com/url?client=internal-element-cse&cx=009682134359037907028:tj6eafkv_be&q=https://www.geeksforgeeks.org/collections-unmodifiableset-method-in-java-with-examples/&sa=U&ved=2ahUKEwi2_5_3-NnsAhWCheYKHZBvD4E4MhAWMAl6BAgAEAI&usg=AOvVaw3MiwTquD0hZgPYmIf9vWdV) | This method returns an unmodifiable view of the specified set. |
| unmodifiableSortedMap​(SortedMap<K,​? extends V> m) | This method returns an unmodifiable view of the specified sorted map. |
| unmodifiableSortedSet​(SortedSet<T> s) | This method returns an unmodifiable view of the specified sorted set. |

1. **What are the underlying ds for linked list arrayList in java?**

LinkedList – Double Ended Queue

ArrayList – Array

1. **What are the advantages and disadvantages of arrayList?**

**Advantage:**

Dynamic in nature (size can be changed during runtime)

Has Predefined Methods for adding, removing and sorting elements.

Add any type of data into ArrayList.

Retrieval is faster in ArrayList.

**Disadvantages:**

If a data entry is added to or removed from an array-based list, data needs to be shifted to update the list.

ArrayList don’t work on primitive values.

1. **What are iterators and cursors?**

Iterator: Iterator is an object that can be used to loop through collections

Methods: hasNext() ,next() , remove()

Cursor: A Java Cursor is an Iterator, which is used to iterate or traverse or

retrieve a Collection or Stream object’s elements one by one.

Type of Cursor : Iterator, Enumeration, ListIterator.

1. **What are the 10 OWASP?**

The security breaches than can happen in front end backend.

10 OWASP:

* Broken Access Control
* Cryptographic Failures
* Injection
* Insecure Design
* Security Misconfiguration
* Vulnerable and Outdated Components
* Identification and Authentication Failures
* Software and Data Integrity Failures
* Security Logging and Monitoring Failures
* Server-Side Request Forgery

1. **Can catch be written without try?**

No, “Catch” has to written for a “Try”.

1. **Can try be written without catch block?**

Yes, we can have “try” without “catch” block by using “finally” block.

We cannot write only “try” block without “catch” or a “finally” block.

1. **Can finally be return without try catch?**

We cannot have a “finally” without a “try”, “Catch” is optional.

1. **IndexOutOfBoundsException and ArrayIndexOutOfBoundsException is same?**

IndexOutOfBoundsException: Thrown to indicate that an index of some sort (such as to an array, to a string, or to a vector) is out of range.

ArrayIndexOutOfBoundsException: Thrown to indicate that an array has been accessed with an illegal index. The index is either negative or greater than or equal to the size of the array.