

Assignment –3

1. What are the predefined functions in collection?

-> Java Collections can achieve all the operations that you perform on a data such as searching, sorting, insertion, manipulation, and deletion.

Java Collection means a single unit of objects. Java Collection framework provides many interfaces (Set, List, Queue, Deque) and classes (ArrayList, Vector, LinkedList, PriorityQueue, HashSet, LinkedHashSet, TreeSet).

2. What are underlying ds for linked list and arraylist.

-> Both ArrayList and LinkedList are two different implementations of the List interface. ArrayList is a resizable-array implementation, whereas LinkedList is a Doubly linked list implementation of the List interface.

3. Advantages and Disadvantages of array list?

-> You can define ArrayList as re-sizable array. Size of the ArrayList is not fixed. ArrayList can grow and shrink dynamically. Elements can be inserted at or deleted from a particular position.

-> A possible disadvantage of ArrayList is that it holds only object types and not primitive types (eg, int). To use a primitive type in an ArrayList, put it inside an object or use the wrapper classes.

4. What are iterators and cursors?

-> An Iterator is an object that can be used to loop through collections, like ArrayList and HashSet.

-> 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.

5. List down the security breaches that can happen in front end and backend OWASP.

- Injection
- Broken authentication

- Sensitive data exposure
- XML external entities (XXE)
- Broken access control
- Security misconfigurations
- Cross site scripting (XSS)
- Insecure deserialization
- Using components with known vulnerabilities
- Insufficient logging and monitoring

6. IndexOutOfBoundsException and arrayIndexOutOfBoundsException is same?

-> This type of exception is thrown when you access the element at an index of a type (String, array, collection) beyond its range. It is the super class of ArrayIndexOutOfBoundsException and StringIndexOutOfBoundsException.

-> 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.

7. Can catch be returned without try?

-> We can't have catch or finally clause without a try statement.

8. Can try be returned without catch?

-> whenever try-block executes successfully, then it can always return value for this method from try-block. But if any exception is raised then it is NOT handled as there is no catch-block for this case.

9. Can finally be returned without try catch?

-> A finally block must be associated with a try block, you cannot use finally without a try block.

10. Difference b/w comparable and comparator?

- Comparable in Java is an object to compare itself with another object, whereas Comparator is an object for comparing different objects of different classes.
- Comparable provides compareTo() method to sort elements in Java whereas Comparator provides compare() method to sort elements in Java.

- Comparable interface is present in java.lang package whereas Comparator interface is present in java.util package.
- Comparable provides single sorting sequence while Comparator provides multiple sorting sequences.
- Comparable affects the original class whereas comparator doesn't affect the original class.