1. **What is the Collection framework in Java?**
   The Collection framework in Java provides an architecture to store and manipulate a group of objects. It includes interfaces like List, Set, and Queue, and classes like ArrayList, LinkedList, and HashSet .

2. **What is the difference between ArrayList and LinkedList?**
   - **ArrayList**: Uses a dynamic array to store elements. It provides fast random access but slow insertion and deletion operations.
   - **LinkedList**: Uses a doubly linked list to store elements. It provides fast insertion and deletion but slower random access .

3. **What is the difference between Iterator and ListIterator?**
   - **Iterator**: Can traverse elements in one direction (forward) and allows removal of elements during iteration.
   - **ListIterator**: Extends Iterator, allowing bidirectional traversal (forward and backward) and additional operations like adding elements .

4. **What is the difference between Iterator and Enumeration?**
   - **Iterator**: Provides methods to remove elements from the collection during iteration.
   - **Enumeration**: Only allows reading elements and does not support element removal .

5. **What is the difference between List and Set?**
   - **List**: An ordered collection that allows duplicate elements.
   - **Set**: An unordered collection that does not allow duplicate elements.

6. **What is the difference between HashSet and TreeSet?**
   - **HashSet**: Implements the Set interface using a hash table. It does not maintain any order of elements.
   - **TreeSet**: Implements the Set interface using a tree structure. It maintains elements in a sorted order .

7. **What is the difference between HashMap and ArrayList?**
   - **HashMap**: Stores key-value pairs and allows fast retrieval based on keys.
   - **ArrayList**: Stores elements in a dynamic array and allows fast random access based on index.