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Java

java.util Package:

`Array List` and **`LinkedList`** are both classes that implement the **`List`** interface,

which is a part of the Java Collections Framework. Both are used to store and manipulate collections of elements.

Array list:

- Dynamic list of items.
- An array list used to store a list of elements.
- Unlike regular arrays, dynamically resized itself.
- Accessed using an index, index starts with a for the first element.
- It provides methods to add, remove, retrieve element.
- When you add elements and the underlying array becomes full,

  And its increases its size automatically.

Example:

```
import java.util.ArrayList;


public class SimpleArrayListExample {
    public static void main(String[] args) {
        // Creating an ArrayList and adding an element in a single line
        ArrayList<String> fruits = new ArrayList<>() {{ add("Apple"); }};


        // Printing the ArrayList
        System.out.println("Fruits: " + fruits);
    }
}
```

Linked list

- Linked list is the chain of the elements.
- It's not backend by a dynamic.
- It is structured as a doubly-linked list.
- Each elements in the linked list is represented by the node that contains the data and reference(links).

Example:

```
import java.util.LinkedList;


public class SimpleLinkedListExample {
   public static void main(String[] args) {
      // Creating a LinkedList and adding an element in a single line
      LinkedList<String> colors = new LinkedList<>() {{ add("Red"); }};

      // Printing the LinkedList
      System.out.println("Colors: " + colors);
   }
}
```

Notes:
Similar between array and linked list are can also dynamically adjust its size.
Both data structures are used to store a collection of elements. Elements can be of any data type, including primitive types or objects.