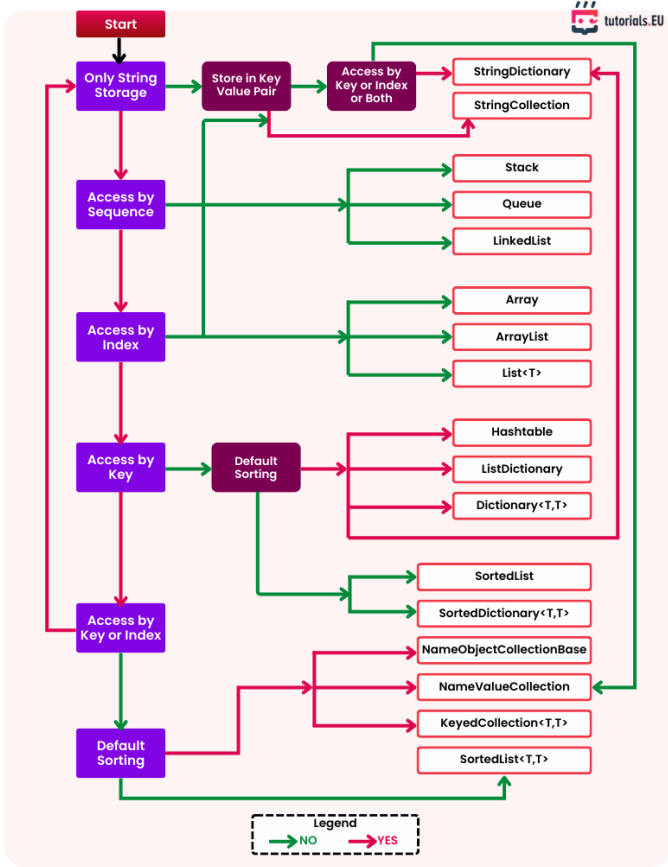


## COLLECTION IN C#



## Important Concept Explained

<b>1.StringDictionary</b> Stores key-value pairs with both keys and values as strings. <div> <b>Use Case</b> Efficient for storing and retrieving string data. </div>	<b>5.LinkedList</b> A doubly linked list. <div> <b>Use Case</b> Good for insertion and deletion operations. </div>	<b>9.Hashtable</b> A collection of key-value pairs organized based on the hash code of the key. <div> <b>Use Case</b> Useful for fast lookups using keys. </div>	<b>13.SortedDictionary&lt;TK,TV&gt;</b> A generic collection of key-value pairs that are sorted by the key. <div> <b>Use Case</b> Ideal for maintaining a sorted dictionary of items. </div>
<b>2.StringCollection</b> A collection that holds strings. <div> <b>Use Case</b> Useful for handling a list of strings </div>	<b>6.Array</b> A fixed-size sequential collection of elements. <div> <b>Use Case</b> Useful when the size of the collection is known and constant. </div>	<b>10.ListDictionary</b> An efficient dictionary for small collections. <div> <b>Use Case</b> Best for small lists where lookups are required. </div>	<b>14.NameValueCollectionBase</b> Provides the base functionality for collections of associated keys and values. <div> <b>Use Case</b> Foundation for collections that associate keys with values. </div>
<b>3.Stack</b> Represents a last-in, first-out (LIFO) collection. <div> <b>Use Case</b> Suitable for scenarios where the last added item needs to be accessed first. </div>	<b>7.ArrayList</b> A dynamic array that can grow in size. <div> <b>Use Case</b> Suitable for collections where the size might change. </div>	<b>11.Dictionary&lt;TK,TV&gt;</b> A generic collection of key-value pairs. <div> <b>Use Case</b> Commonly used for storing and retrieving data using keys. </div>	<b>15.NameValueCollection</b> A collection that can store multiple values for a single key. <div> <b>Use Case</b> Useful for scenarios where multiple values need to be associated with a single key. </div>
<b>4.Queue</b> Represents a first-in, first-out (FIFO) collection. <div> <b>Use Case</b> Ideal for processing items in the order they were added. </div>	<b>8.List</b> A generic list that allows storing elements of a specific type. <div> <b>Use Case</b> Commonly used for storing a list of items where the type is known. </div>	<b>12.SortedList</b> A collection of key-value pairs sorted by the keys. <div> <b>Use Case</b> Useful when sorted order of keys is needed. </div>	<b>16.KeyedCollection&lt;TK,TV&gt;</b> A collection of objects where each object has a key. <div> <b>Use Case</b> Ideal for collections where each item has a unique identifier. </div>

## Summary

**By Sequence:** Stack (LIFO), Queue (FIFO), LinkedList

**By Index:** Array, ArrayList, List

**By Key:** Hashtable, ListDictionary  
Dictionary<TK,TV>.

**String Storage:** StringDictionary, StringCollection

**Sorted:** SortedList, SortedDictionary<TK,TV>

**Specialized:** NameObjectCollectionBase, NameValueCollection, KeyedCollection<TK,TV>