Array Built-in Functions in Java

Java provides a utility class called **java.util.Arrays** that contains many useful static methods for working with arrays.

toString(): Prints array elements as a string.
```
int[] arr = {1, 2, 3, 4}; System.out.println(Arrays.toString(arr));
```

sort(): Sorts the elements of the array in ascending order.
```
int[] arr = {5, 2, 8, 1}; Arrays.sort(arr);
```

binarySearch(): Searches for an element in a sorted array.
```
int[] arr = {1, 3, 5, 7, 9}; int index = Arrays.binarySearch(arr, 7);
```

equals(): Checks if two arrays are equal.
```
int[] a = {1, 2, 3}; int[] b = {1, 2, 3}; System.out.println(Arrays.equals(a, b));
```

fill(): Fills all elements of the array with a specific value.
```
int[] arr = new int[5]; Arrays.fill(arr, 10);
```

copyOf(): Copies the given array into a new array of a specified length.
```
int[] arr = {1, 2, 3}; int[] newArr = Arrays.copyOf(arr, 5);
```

copyOfRange(): Copies a range of elements from one array into another.
```
int[] arr = {10, 20, 30, 40, 50}; int[] part = Arrays.copyOfRange(arr, 1, 4);
```

deepToString(): Used for multi-dimensional arrays.
```
int[][] arr = {{1,2}, {3,4}}; System.out.println(Arrays.deepToString(arr));
```

deepEquals(): Compares two multi-dimensional arrays.
```
int[][] a = {{1,2},{3,4}}; int[][] b = {{1,2},{3,4}};
System.out.println(Arrays.deepEquals(a, b));
```

asList(): Converts an array to a List.
```
String[] arr = {"Apple", "Banana", "Mango"}; System.out.println(Arrays.asList(arr));
```

Summary Table

Method	Description
toString()	Prints array elements as a string
sort()	Sorts array elements
binarySearch()	Finds index of element in sorted array
equals()	Compares two arrays
fill()	Fills array with given value
copyOf()	Copies whole array to a new array
copyOfRange()	Copies specific range of elements
deepToString()	Prints multi-dimensional array
deepEquals()	Compares multi-dimensional arrays
asList()	Converts array to List