



# Java

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## Assignment-11

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Topic : Arrays

## What package is used to import Arrays and it's use?

We use java.util package to import the arrays in java. It provides methods to create, access and manipulate the java arrays dynamically.

### Methods in Arrays:

**Length:** arr.length

program:

```
1 package com.Arrays.level2;
2
3 import java.util.Scanner;
4
5 public class LengthMethod {
6
7     public static void main(String[] args) {
8         // TODO Auto-generated method stub
9         System.out.println("Enter array length: ");
10        Scanner scan=new Scanner(System.in);
11        int len=scan.nextInt();
12        int arr[]=new int[len];
13
14        System.out.println("Length of the array is: "+len);
15    }
16 }
17
```

Console × Terminal

<terminated> LengthMethod [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (13-Sept-2024)

Enter array length:

6

Length of the array is: 6

**Access Element:**

```
1 package com.Arrays.level2;
2 import java.util.Scanner;
3 public class AccessElementMethod {
4
5     public static void main(String[] args) {
6         // TODO Auto-generated method stub
7         System.out.println("Enter array length: ");
8         Scanner scan=new Scanner(System.in);
9         int arr[]=new int[scan.nextInt()];
10        System.out.println("Enter the values in array: ");
11        for(int i=0;i<=arr.length-1;i++)
12        {
13            arr[i]=scan.nextInt();
14        }
15        System.out.println("Selected array value is "+arr[2]);
16    }
17 }
```

Console × Terminal

<terminated> AccessElementMethod [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (13-Sept-2024)

Enter array length:

5

Enter the values in array:

2

3

4

5

6

Selected array value is 4

## Modify Element:

It is used to modify the Elements in the array list.

Program:

```
1 package com.Arrays.level2;
2
3 import java.util.Scanner;
4
5 public class ModifyElementMethod {
6     public static void main(String[] args) {
7
8         System.out.println("Enter array length: ");
9         Scanner scan=new Scanner(System.in);
10        int arr[]=new int[scan.nextInt()];
11        System.out.println("Enter the values in array: ");
12        for(int i=0;i<=arr.length-1;i++)
13        {
14            arr[i]=scan.nextInt();
15        }
16        System.out.println("Select modify position and value");
17        arr[scan.nextInt()]=scan.nextInt();
18        System.out.println("Modified values are");
19        for(int i=0;i<=arr.length-1;i++)
20        {
21            System.out.print(arr[i]+" | ");
22        }
23    }
}
```

Console × Terminal

<terminated> ModifyElementMethod [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (13-Sept-2023)

Enter array length:  
5  
Enter the values in array:  
2  
3  
4  
5  
6  
Select modify position and value  
2  
10  
Modified values are  
2 | 3 | 10 | 5 | 6 |

## Sort:

It is used to sort the Elements in the array list.

Program:

```
1 package com.Arrays.level2;
2
3 import java.util.Arrays;
4 import java.util.Scanner;
5
6 public class SortElement {
7
8     public static void main(String[] args) {
9         // TODO Auto-generated method stub
10        System.out.println("Enter array length: ");
11        Scanner scan=new Scanner(System.in);
12        int arr[]=new int[scan.nextInt()];
13        System.out.println("Enter the values in array:  ");
14        for(int i=0;i<=arr.length-1;i++)
15        {
16            arr[i]=scan.nextInt();
17        }
18
19        Arrays.sort(arr);
20        System.out.println("Sorted values are....");
21        for(int i=0;i<=arr.length-1;i++)
22        {
23            System.out.print(arr[i]+" | ");
24        }
25    }
26 }
```

Console × Terminal

<terminated> SortElement [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (13-Sept-2023, 3:30:48 pm)

Enter array length:  
5  
Enter the values in array:  
5  
8  
7  
9  
6  
Sorted values are....  
5 | 6 | 7 | 8 | 9 | |

## equals:

Compare two arrays

```
1 package com.Arrays.level2;
2 import java.util.Arrays;
3 import java.util.Scanner;
4 public class EqualsArray {
5     public static void main(String[] args) {
6         System.out.println("Enter array length: ");
7         Scanner scan=new Scanner(System.in);
8         int arr[]=new int[scan.nextInt()];
9         System.out.println("Enter the values in array 1: ");
10        for(int i=0;i<=arr.length-1;i++)
11        {
12            arr[i]=scan.nextInt();
13        }
14        System.out.println("Enter array length: ");
15        int arr2[]=new int[scan.nextInt()];
16        System.out.println("Enter the values in array 2: ");
17        for(int i=0;i<=arr2.length-1;i++)
18        {
19            arr2[i]=scan.nextInt();
20        }
21        System.out.println("Both arrays are "+Arrays.equals(arr,arr2));
22    }
23 }
```

Console × Terminal

<terminated> EqualsArray [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (13-Sept-2023, 3:48:09 pm)

```
4
Enter the values in array 1:
1
2
3
4
Enter array length:
4
Enter the values in array 2:
1
2
3
4
Both arrays are true
```

## Copy Array:

Copy array into another array.

```
5
6 public class CopyArray {
7
8     public static void main(String[] args) {
9         System.out.println("Enter array length: ");
10        Scanner scan=new Scanner(System.in);
11        int arr[]=new int[scan.nextInt()];
12        System.out.println("Enter the values in array 1: ");
13        for(int i=0;i<=arr.length-1;i++)
14        {
15            arr[i]=scan.nextInt();
16        }
17        System.out.println("Original array: "+arr);
18        System.out.println("Enter array length: ");
19        int arr2[]=Arrays.copyOf(arr,scan.nextInt());
20        System.out.println("Enter the values in array 2: ");
21        for(int i=0;i<=arr2.length-1;i++)
22        {
23            System.out.println("Copy of two arrays "+arr2);|
24        }
25    }
26 }
27
```

Console × Terminal

<terminated> CopyArray [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (13-Sept-2023, 4:33:47 pm – 4:33:57 pm)

Enter array length:

3

Enter the values in array 1:

1

2

3

Original array: [I@20ad9418

Enter array length:

3

Enter the values in array 2:

Copy of two arrays [I@31cefde0

Copy of two arrays [I@31cefde0

Copy of two arrays [I@31cefde0

## asList:

Convert Array as a List.

```
1 package com.Arrays.level2;
2
3 import java.util.Arrays;
4 import java.util.Scanner;
5
6 public class asList {
7
8     public static void main(String[] args) {
9         // TODO Auto-generated method stub
10        System.out.println("Enter ");
11        Scanner scan=new Scanner(System.in);
12        int arr[]=new int[scan.nextInt()];
13        for(int i=0;i<=arr.length-1;i++)
14        {
15            arr[i]=scan.nextInt();
16        }
17        for(int i=0;i<=arr.length-1;i++)
18        {
19            System.out.println("Array As List: "+Arrays.asList(arr));|
20        }
21    }
22 }
23
```

Console × Terminal

<terminated> asList [Java Application] C:\Program Files\Java\jdk-19\bin\javaw.exe (13-Sept-2023, 4:47:23 pm)

Enter

4

1

2

3

4

Array As List: [[I@20ad9418]

Array As List: [[I@20ad9418]

Array As List: [[I@20ad9418]

Array As List: [[I@20ad9418]