

Loops in java :

- * A loop is nothing but repetition of statement.
- * In Java, We have 4 types of loop :
 - a) do-while loop
 - b) while loop
 - c) for loop
 - d) for-each loop

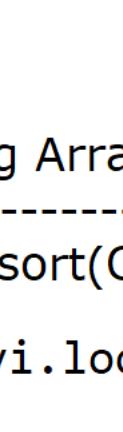
For-Each loop in Java :

- * It is also known as Enhanced for Loop.
- * It was introduced from JDK 1.5V
- * Whenever we write for each loop then internally Java compiler generates OR converts this for each loop in ordinary for loop.
- * It is mainly used to retrieve the values from the collection (array) one by one.

Example :

```
int []values = {23,90,78,45};  
for(int value : values)  
{  
    System.out.println(value);  
}
```

Note : values is an array variable which can hold multiple values, on the other hand value is an ordinary variable which can hold only one value at a time.



```
for(int i=0; i<values.length; i++)  
{  
    System.out.println(values[i]);  
}
```

Ordinary for loop is generated by Java Compiler.

//WAP to fetch the value from array by using for each loop :

```
package com.ravi.loop;  
  
public class ForEachDemo1  
{  
    public static void main(String[] args)  
    {  
        int []values = {12,89,11,90,45,67,12};  
  
        for(int value : values)  
        {  
            System.out.println(value);  
        }  
    }  
}
```

WAP to sort the array data in ascending order by using for each loop :

How to sort Array Data in Ascending Order :

- * There is a predefined class called **Arrays** available in `java.util` package. It contains a static method called `sort()` which accepts integer array as a parameter.

`public static void sort(int []arr)`

* The `sort()` method will automatically sort the array in ascending order.

`package com.ravi.loop;`

`import java.util.Arrays;`

`public class ForEachDemo2 {`

`public static void main(String[] args)`

`{
 int []values = {90, 56, 11, 78, 34};
 Arrays.sort(values);
 for(int value : values)
 {
 System.out.println(value);
 }
 }
}`

How to sort String Array :

`public static void sort(Object[] arr)`

`package com.ravi.loop;`

`import java.util.Arrays;`

`public class ForEachDemo3 {`

`public static void main(String[] args)`

`{
 String [] cities = {"Pune", "Hyderabad", "Kolkata", "Indore"};
 Arrays.sort(cities);
 for(String city : cities)
 {
 System.out.println(city);
 }
 }
}`

Can we take heterogeneous types of data by using Array :

Yes, We can take heterogeneous types of data in array by using **Object array** concept.

`package com.ravi.loop;`

`public class ForEachDemo4 {`

`public static void main(String[] args)`

`{
 Object []arr = {12, 89.90, 'G', true, "NIT"};
 for(Object x : arr)
 {
 System.out.println(x);
 }
 }
}`

Note : We cannot perform sorting operation on heterogeneous types of data otherwise It will generate `java.lang.ClassCastException`.

What is BLC and ELC class in java ?

BLC :

- * It stands for "Business Logic Class" in java. We should always write our business logic in the BLC class. It will never contain main method.

Example :

`public class Calculator`

`{
 //We should write the Logic Here
}`

ELC :

- * It stands for "Executable Logic class". It will never contain any logic.

- * It must contain main method so the execution of the program will start from ELC class.

Example :

`public class Main`

`{
 public static void main(String [] args)
 {
 }
}`

How many public classes we can write in a single .java file ?

* We can write only one public class for a single .java file. The public class must be our file name.