

JAVA LOOPS INJAVA

Art by
pm



FOR Each LOOP:-

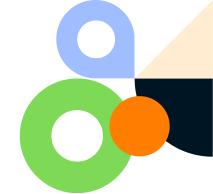
The for-each loop, also known as the enhanced for loop, is a powerful iteration construct in Java.

It simplifies traversing arrays and collections, offering cleaner, more readable code.

Let's dive in:



Syntax of a For Each Loop:-

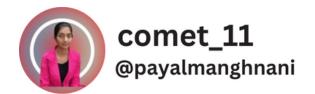


```
for (dataType variable :
arrayOrCollection) { // Block of
code to be executed for each
element in the array or collection
}

#Quote #Programming #Selfcare
```



The dataType represents the type of elements in the array or collection, and the variable is used to represent each element during the iteration.









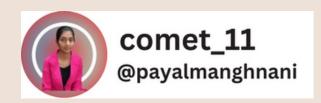
ForEachLoopExample.java

```
public class ForEachLoopExample {
  public static void main(String[] args) {
    int[] numbers = {1, 2, 3, 4, 5};
    for (int number : numbers) {
        System.out.println(number);
    }
  }
}
```



Example Explanation:-

- The program starts executing from the main method.
- 2. The array numbers is initialized with values {1, 2, 3, 4, 5}.
- 3. The for-each loop is initiated. It iterates through each element of the numbers array.
- 4. For each iteration, the value of the current element is printed using System.out.println(number);.
- 5. After all elements have been processed, the loop terminates, and the program execution continues to the end of the main method.
- 6. The program finishes its execution, and the output (printed values) will be displayed on the console:



Example Output:-





Explanation:

The for-each loop iterates through each element of the numbers array, and during each iteration, it prints the value of the current element (held in the loop variable number). As a result, it prints all the elements of the array one by one, each on a new line.





Advantages:-

- Simplicity: The for-each loop eliminates the need for explicit index handling, making the code more readable and less error-prone.
- Readability: The loop's concise syntax enhances code readability, making it easier to understand the iteration process.
- Efficient: For-each loops are optimized internally for better performance.

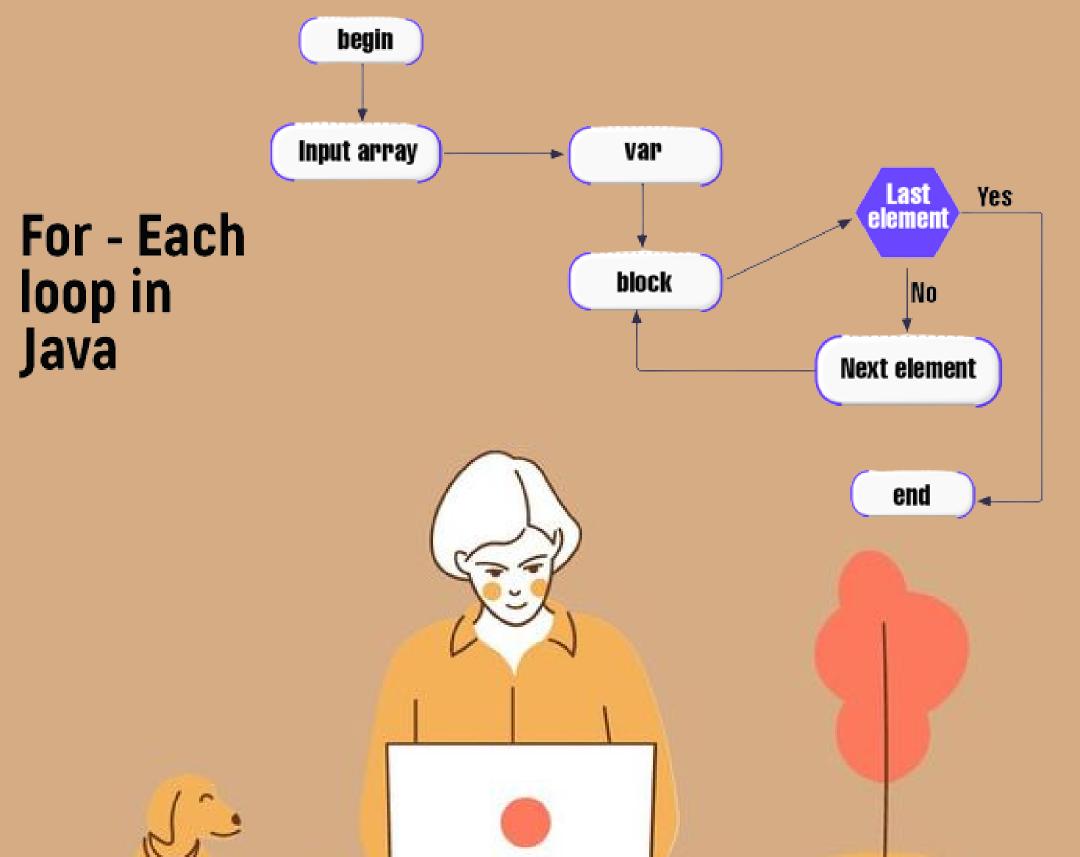




Disadvantages:-

 No Index Access: For-each loops do not provide access to the index of the current element, making it unsuitable for situations where index manipulation is required.

Read-Only: The for-each loop
is suitable for read-only
access to elements, as it does
not allow modifying the
elements in the array or
collection during iteration.





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