

Day 17 – Array Input (Scanner) and Traversal

Today we will learn how to take array input from the user using Scanner and how to traverse array elements using loops. Content is written continuously without leaving pages empty.

1. Array Input using Scanner

To take input from the user in an array, first we take the size of the array. Then we use a loop to store values one by one.

Syntax:

```
Scanner sc = new Scanner(System.in);
int n = sc.nextInt();
int[] arr = new int[n];

for(int i = 0; i < n; i++) {
    arr[i] = sc.nextInt();
}
```

2. Array Traversal

Array traversal means accessing each element of the array one by one.

Traversal using for loop:

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

Traversal using for-each loop:

```
for(int x : arr) {
    System.out.println(x);
}
```

3. Complete Example – Array Input and Traversal

```
import java.util.*;
class ArrayInputExample {
    public static void main(String[] args) {
        Scanner sc = new Scanner(System.in);
        System.out.print("Enter array size: ");
        int n = sc.nextInt();
        int[] arr = new int[n];

        System.out.println("Enter array elements:");
        for(int i = 0; i < n; i++) {
            arr[i] = sc.nextInt();
        }

        System.out.println("Array elements are:");
        for(int i = 0; i < arr.length; i++) {
            System.out.println(arr[i]);
        }
    }
}
```

4. Practice Questions

1. Write a program to input 5 integers in an array and print them.
2. Write a program to find the sum of array elements entered by the user.
3. Write a program to find the largest element in an array.
4. Write a program to count even and odd numbers in an array.

5. Write a program to print array elements using for-each loop.

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