1. Access an Array Element by Index

Write a Java program to access and print the third element of an array without using loops.

```
java
Copy code
public class Main {
    public static void main(String[] args) {
        int[] numbers = {10, 20, 30, 40, 50};

        System.out.println("Third element: " + numbers[2]);  // Arrays are
zero-indexed
    }
}
```

Output:

```
yaml
Copy code
Third element: 30
```

Explanation:

The program accesses the third element directly using its index (`numbers[2]`). No loops are required to access specific elements by their index.

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2. Change an Element in an Array

Write a Java program to change the second element in an array.

```
java
Copy code
public class Main {
    public static void main(String[] args) {
        String[] fruits = {"Apple", "Banana", "Cherry"};

        fruits[1] = "Orange";  // Replacing the second element

        System.out.println("Updated array: " + fruits[1]);
    }
}
```

Output:

```
c
Copy code
Updated array: Orange
```

Explanation:

This program directly changes the value at index 1 in the array from `"Banana"` to `"Orange"`.

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3. Accessing Array Length

Write a Java program to display the length of an array without using a loop.

```
java
Copy code
public class Main {
    public static void main(String[] args) {
        double[] numbers = {1.1, 2.2, 3.3, 4.4, 5.5};

        System.out.println("Array length: " + numbers.length);
    }
}
```

Output:

```
javascript
Copy code
Array length: 5
```

Explanation:

The `length` attribute of an array in Java can be accessed directly to get the size of the array, no loop is needed.

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4. Copy an Array to Another Array

Write a Java program to copy an array into another array without using loops.

```
java
Copy code
import java.util.Arrays;

public class Main {
    public static void main(String[] args) {
        int[] original = {10, 20, 30};
        int[] copy = Arrays.copyOf(original, original.length);  // Copy array

        System.out.println("Copied array: " + Arrays.toString(copy));
    }
}
```

Output:

```
c
Copy code
Copied array: [10, 20, 30]
```

Explanation:

Here, we use `Arrays.copyOf()` to copy the original array to a new array without manually iterating over the elements.

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5. Check if Two Arrays are Equal

Write a Java program to check if two arrays are equal without using loops.

```
java
Copy code
import java.util.Arrays;

public class Main {
    public static void main(String[] args) {
        int[] array1 = {1, 2, 3};
        int[] array2 = {1, 2, 3};

        boolean isEqual = Arrays.equals(array1, array2);  // Compare arrays

        System.out.println("Arrays are equal: " + isEqual);
    }
}
```

Output:

```
sql
Copy code
Arrays are equal: true
```