YAY!

1. Find the Maximum Element in an Array

Problem: Write a Java program to find the largest element in a given array.

Sample Input:

```
arr = {12, 45, 67, 23, 89, 34}
```

Sample Output:

```
Maximum element: 89
```

2. Find the Minimum Element in an Array

Problem: Write a Java program to find the smallest element in a given array.

Sample Input:

```
arr = {5, 8, 2, 17, 1, 9}
```

Sample Output:

```
Minimum element: 1
```

3. Check if an Array is Sorted

Problem: Write a Java program to check if a given array is sorted in ascending order.

Sample Input:

```
arr = {1, 2, 3, 4, 5}
```

Sample Output:

```
Array is sorted
```

Sample Input:

```
arr = {3, 1, 4, 2, 5}
```

Sample Output:

```
Array is not sorted
```

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4. Count Even and Odd Numbers in an Array

Problem: Write a Java program to count the number of even and odd elements in an array.

Sample Input:

```
arr = {10, 21, 30, 41, 50}
```

Sample Output:

```
Even count: 3, Odd count: 2
```

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5. Reverse an Array

Problem: Write a Java program to reverse a given array.

Sample Input:

```
arr = {1, 2, 3, 4, 5}
```

Sample Output:

```
Reversed array: {5, 4, 3, 2, 1}
```

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6. Find Second Largest Element in an Array

Problem: Write a Java program to find the second largest element in an array.

Sample Input:

```
arr = {10, 20, 4, 45, 99}
```

Sample Output:

```
Second largest element: 45
```

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7. Remove Duplicates from an Array

Problem: Write a Java program to remove duplicate elements from an array.

Sample Input:

```
arr = {1, 2, 2, 3, 4, 4, 5}
```

Sample Output:

```
Array after removing duplicates: {1, 2, 3, 4, 5}
```

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8. Count the Frequency of Each Element in an Array

Problem: Write a Java program to count the occurrences of each element in an array.

Sample Input:

```
arr = {1, 2, 2, 3, 3, 3, 4}
```

Sample Output:

```
1 -> 1 times
2 -> 2 times
3 -> 3 times
4 -> 1 time
```

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9. Find the Sum of All Elements in an Array

Problem: Write a Java program to find the sum of all elements in a given array.

Sample Input:

```
arr = {5, 10, 15, 20}
```

Sample Output:

```
Sum of array elements: 50
```

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10. Find the Difference Between the Sum of Even and Odd Numbers in an Array

Problem: Write a Java program to find the difference between the sum of even and odd numbers in an array.

Sample Input:

```
arr = {3, 8, 15, 6, 9, 2}
```

Sample Output:

```
Difference: (Sum of evens - Sum of odds) = (16 - 27) = -11
```