Arrays und Methoden

Eigene Methoden mit Arrays schreiben

Inhaltsverzeichnis

Vorbereitung

```
public class ArrayTest {

	public static int[] zufArray(int length, int range) {
		int[] array = new int[length];
		for (int i=0; i<length; ++i) {
			array[i] = (int)(Math.random()*range);
		}
		return array;
	}

	public static void print(int[] array) {
		for (int i=0; i<array.length; ++i) {
			System.out.print(array[i]+" ");
		}
		System.out.println();
	}

	public static void main (String[] args) {
		int[] array = zufArray(10,10);
		print(array);
		System.out.println("Minimum: " + minimum(array));
		System.out.println("Summe: " + sum(array));
		System.out.println("Ungerade Werte: " + oddNumbers(array));
		System.out.println("Enthält Null? " + containsZero(array));
		System.out.println("Benachbarte Gleiche? " + sameNeighbours(array));
		System.out.println("Anzahl: " + occurences(array,5));
		System.out.println("Sortiert? " + isSorted(array));
		System.out.println("Nicht enthalten: " + containsNot(array));
	}
}
```

Minimum

```
public static int minimum(int[] array) {
	int min = Integer.MAX_VALUE;
	for (int i=0; i<array.length; ++i) {
		if (array[i] < min)
			min = array[i];
	}
	return min;
}
```

Summe

```
public static int sum(int[] array) {
	int sum = 0;
	for (int i=0; i<array.length; ++i) {
		sum += array[i];
	}
	return sum;
}
```

Ungerade Werte

```
public static int oddNumbers(int[] array) {
	int odd = 0;
	for (int i=0; i<array.length; ++i) {
		if (array[i]%2 == 1)
			++odd;
	}
	return odd;
}
```

Enthält Null

```
public static boolean containsZero(int[] array) {
	for (int i=0; i<array.length; ++i) {
		if (array[i] == 0)
			return true;
	}
	return false;
}
```

Benachbarte Gleiche

```
public static boolean sameNeighbours(int[] array) {
	for (int i=1; i<array.length; ++i) {
		if (array[i] == array[i-1])
			return true;
	}
	return false;
}
```

Anzahl

```
public static int occurences(int[] array, int value) {
	int occur = 0;
	for (int i=0; i<array.length; ++i) {
		if (array[i] == value)
			++occur;
	}
	return occur;
}
```

Sortiert

```
public static boolean isSorted(int[] array) {
	for (int i=1; i<array.length; ++i) {
		if (array[i] < array[i-1])
			return false;
	}
	return true;
}
```

Nicht enthalten

```
public static int containsNot(int[] array) {
	int nr = 0;
	while (occurences(array,nr) > 0) {
		++nr;
	}
	return nr;
}
```