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import java.util.Arrays;

// Strategy interface
interface SortStrategy {
    void sort(int[] data);
}

// Concrete strategy: Bubble Sort
class BubbleSort implements SortStrategy {
    public void sort(int[] data) {
        int n = data.length;
        for (int i = 0; i < n-1; i++) {
            for (int j = 0; j < n-i-1; j++) {
                if (data[j] > data[j+1]) {
                    int temp = data[j];
                    data[j] = data[j+1];
                    data[j+1] = temp;
                }
            }
        }
    }
}

// Concrete strategy: Merge Sort
class MergeSort implements SortStrategy {
    public void sort(int[] data) {
        if (data.length < 2) return;
        int mid = data.length / 2;
        int[] left = Arrays.copyOfRange(data, 0, mid);
        int[] right = Arrays.copyOfRange(data, mid, data.length);
        sort(left);
        sort(right);
        merge(data, left, right);
    }

    private void merge(int[] data, int[] left, int[] right) {
        int i = 0, j = 0, k = 0;
        while (i < left.length && j < right.length) {
            if (left[i] <= right[j]) {
                data[k++] = left[i++];
            } else {
                data[k++] = right[j++];
            }
        }
    }
}

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        while (i < left.length) {
            data[k++] = left[i++];
        }
        while (j < right.length) {
            data[k++] = right[j++];
        }
    }
}

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// Context
class Sorter {
    private SortStrategy strategy;

    public Sorter(SortStrategy strategy) {
        this.strategy = strategy;
    }

    public void setStrategy(SortStrategy strategy) {
        this.strategy = strategy;
    }

    public void sortArray(int[] data) {
        strategy.sort(data);
    }
}

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// Client code to test Strategy Pattern
public class SortingApp {
    public static void main(String[] args) {
        int[] arr = {64, 25, 12, 22, 11};
        Sorter sorter = new Sorter(new BubbleSort());
        sorter.sortArray(arr);
        System.out.println("Bubble Sorted array: " + Arrays.toString(arr));

        sorter.setStrategy(new MergeSort());
        sorter.sortArray(arr);
        System.out.println("Merge Sorted array: " + Arrays.toString(arr));
    }
}

```