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Homework: Array

Array of primitive data type:

```
package array;

public class PrimitiveArray {

	public static void main(String[] args) {

		// Declaration and initialization of an array of integers
		int[] numbers = { 1, 2, 3, 4, 5 };

		// Accessing elements of the array
		System.out.println("Elements of the array:");
		for (int i = 0; i < numbers.length; i++) {
			System.out.println("Element at index " + i + ": " +
numbers[i]);
		}

		// Modifying an element in the array
		numbers[2] = 10;
		numbers[1] = 54;

		// Displaying the modified array
		System.out.println("\nModified array:");
		for (int i = 0; i < numbers.length; i++) {
			System.out.println("Element at index " + i + ": " +
numbers[i]);
		}
	}
}
```

Array of reference data type:

```
package array;

// Define a class for objects in the array
class Student {

	String name;
	int age;
	int rollNum;
	double cgpa;

	// Constructor
	public Student(String name, int age, int rollNum, double cgpa) {
		this.name = name;
		this.age = age;
		this.rollNum = rollNum;
		this.cgpa = cgpa;
	}
}

public class ReferenceArray {

	public static void main(String[] args) {

		// Create an array of Student objects
		Student[] students = new Student[3];

		// Initialize individual objects in the array
		students[0] = new Student("Ajay", 20, 101, 3.8);
		students[1] = new Student("Sam", 22, 102, 3.5);
		students[2] = new Student("Sagar", 21, 103, 3.9);
```

```
        // Access and display information about each student
        System.out.println("Students in the array:");
        for (Student student : students) {
            System.out.println("Name: " + student.name + ", Age: "
+ student.age + ", Roll Number: " + student.rollNum
                    + ", CGPA: " + student.cgpa);
        }
    }
}
```