Q1. Write a Java program to find the sum of all elements in an array.

```
package new_p;


public class Day3_Arrays_Q2 {
   public static void main(String[] args) {
      int[] array = {1, 2, 3, 4, 5, 6};
      int evenC = 0, oddC = 0;


      for (int num : array) {
         if (num % 2 == 0) {
            evenC++;
         } else {
            oddC++;
         }
      }
      System.out.println("Even count: " + evenC);
      System.out.println("Odd count: " + oddC);
   }
}
```

Q2. Count even and odd numbers from an array.

Answer:

```
package new_p;


public class Day3_Arrays_Q2 {
   public static void main(String[] args) {
      int[] array = {1, 2, 3, 4, 5, 6};
      int evenC = 0, oddC = 0;
```

```
        for (int num : array) {
            if (num % 2 == 0) {
                evenC++;
            } else {
                oddC++;
            }
        }
        System.out.println("Even count: " + evenC);
        System.out.println("Odd count: " + oddC);
    }
}
```

Q3. Find the maximum and minimum elements in an array.

Answer:

```
package new_p;

public class Day3_Arrays_Q3 {
    public static void main(String[] args) {
        int[] array = {10, 20, 30, 40, 50};
        int max = array[0], min = array[0];

        for (int num : array) {
            if (num > max) max = num;
            if (num < min) min = num;
        }

        System.out.println("Maximum: " + max);
        System.out.println("Minimum: " + min);
    }
}
```

Q4. Find the second highest element in an array.

Answer:

```
package new_p;


public class Day3_Arrays_Q4 {
   public static void main(String[] args) {
      int[] array = {10, 20, 30, 40, 50};
      int first = Integer.MIN_VALUE, second = Integer.MIN_VALUE;


      for (int num : array) {
         if (num > first) {
            second = first;
            first = num;
         } else if (num > second && num != first) {
            second = num;
         }
      }
      System.out.println("Second highest element: " + second);
   }
}
```

Q5. Search for a number entered by the user in an array.

Answer:

```
package new_p;


import java.util.Scanner;


public class Day3_Arrays_Q5 {
   public static void main(String[] args) {
      int[] array = {10, 20, 30, 40, 50};
```

```
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter a number to search: ");
        int t = sc.nextInt();
        boolean found = false;

        for (int num : array) {
            if (num == t) {
                found = true;
                break;
            }
        }

        if (found) {
            System.out.println(t + " is found in the array.");
        } else {
            System.out.println(t + " is not found in the array.");
        }
        sc.close();
    }
}
```

Q6. Print an array in reverse order.

Answer:

```
package new_p;

public class Day3_Arrays_Q6 {
    public static void main(String[] args) {
        int[] array = {1, 2, 3, 4, 5};
```

```
    System.out.println("Original array:");
    for (int num : array) {
      System.out.print(num + " ");
    }

    System.out.println("\nArray in reverse order:");
    for (int i = array.length - 1; i >= 0; i--) {
      System.out.print(array[i] + " ");
    }
  }
}
```

Q7. Print only prime numbers from an array.

Answer:

```
package new_p;

public class Day3_Arrays_Q7 {
  public static void main(String[] args) {
    int[] array = {2, 3, 4, 5, 6, 7, 8, 9};
    System.out.println("Prime numbers in array:");

    for (int num : array) {
      if (isPrime(num)) {
        System.out.print(num + " ");
      }
    }
  }

  public static boolean isPrime(int num) {
```

```
        if (num <= 1) return false;
        for (int i = 2; i <= Math.sqrt(num); i++) {
            if (num % i == 0) return false;
        }
        return true;
    }
}
```

Q8. Create an Employee class and sort employees using Comparable.

Answer:

```
package day9_assign;

import java.util.ArrayList;
import java.util.Collections;
import java.util.List;

class Employee implements Comparable<Employee> {
    private String name;
    private int id;
    private double salary;

    public Employee(String name, int id, double salary) {
        this.name = name;
        this.id = id;
        this.salary = salary;
    }

    public String getName() { return name; }
    public int getId() { return id; }
    public double getSalary() { return salary; }
```

```
    @Override
    public int compareTo(Employee other) {
        return this.name.compareTo(other.name);  // Sort by name
    }

    @Override
    public String toString() {
        return "Name: " + name + ", ID: " + id + ", Salary: " + salary;
    }
}

public class Q3 {
    public static void main(String[] args) {
        List<Employee> employees = new ArrayList<>();

        employees.add(new Employee("A", 101, 50000.0));
        employees.add(new Employee("B", 102, 60000.0));
        employees.add(new Employee("C", 103, 55000.0));
        employees.add(new Employee("D", 104, 70000.0));
        employees.add(new Employee("E", 105, 45000.0));

        System.out.println("Before sorting:");
        for (Employee e : employees) {
            System.out.println(e);
        }

        Collections.sort(employees);
```

```
        System.out.println("\nAfter sorting:");
        for (Employee e : employees) {
            System.out.println(e);
        }
    }
}
```