Q1: Sum of Digits using Recursion

java
Copy code

```java
public class SumOfDigits {
    public static int sumDigits(int n) {
        if (n == 0) return 0;
        return (n % 10) + sumDigits(n / 10);
    }

    public static void main(String[] args) {
        int n = 1234;
        System.out.println(sumDigits(n)); // Output: 10
    }
}
```

Q2: Sum of Natural Numbers with Alternate Signs

java
Copy code

```java
public class AlternateSum {
    public static int alternateSum(int n) {
        if (n == 0) return 0;
        return (n % 2 == 0 ? -n : n) + alternateSum(n - 1);
    }

    public static void main(String[] args) {
        int n1 = 10, n2 = 5;
        System.out.println(alternateSum(n1)); // Output: -5
        System.out.println(alternateSum(n2)); // Output: 3
    }
}
```

Q3: Maximum Value in an Array

java

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```
public class MaxValue {
    public static void main(String[] args) {
        int[] arr = {13, 1, -3, 22, 5};
        int max = arr[0];

        for (int num : arr) {
            if (num > max) {
                max = num;
            }
        }

        System.out.println(max); // Output: 22
    }
}
```

Q4: Sum of Array Values

java
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```
public class SumArray {
    public static void main(String[] args) {
        int[] arr = {92, 23, 15, -20, 10};
        int sum = 0;

        for (int num : arr) {
            sum += num;
        }

        System.out.println(sum); // Output: 120
    }
}
```

Q5: Check if a Number is an Armstrong Number

java

Copy code

```
public class ArmstrongNumber {
    public static boolean isArmstrong(int n) {
        int temp = n, sum = 0, digits = String.valueOf(n).length();

        while (temp > 0) {
            int digit = temp % 10;
            sum += Math.pow(digit, digits);
            temp /= 10;
        }

        return sum == n;
    }

    public static void main(String[] args) {
        int n1 = 153, n2 = 134;
        System.out.println(isArmstrong(n1) ? "Yes" : "No"); // Output:
Yes
        System.out.println(isArmstrong(n2) ? "No" : "No");  // Output:
No
    }
}
```