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import java.io.BufferedReader;

import java.io.InputStreamReader;

class Day55 {

    public static void main(String[] args) throws Exception {

        BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

        int n = Integer.parseInt(br.readLine());

        int[] X = new int[n];

        int[] Y = new int[n];

        String[] inputLineX = br.readLine().split(" ");

        String[] inputLineY = br.readLine().split(" ");

        for (int i = 0; i < n; i++) {

            X[i] = Integer.parseInt(inputLineX[i]);

        }

        for (int i = 0; i < n; i++) {

            Y[i] = Integer.parseInt(inputLineY[i]);

        }

        long maxScalarProduct = findMaxScalarProduct(X, Y, n);

        System.out.println(maxScalarProduct);

    }

    // Function to find the maximum scalar product of two vectors represented by arrays X and Y
    static long findMaxScalarProduct(int[] X, int[] Y, int n) {

        long result = 0;

        // Sort both arrays
        Arrays.sort(X);

        Arrays.sort(Y);

        // Calculate the sum of the products of the corresponding elements
        for (int i = 0; i < n; i++) {

            result += (long) X[i] * Y[i];

        }

    }

}

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        return result;
    }
}
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