Find the Mth maximum number and Nth minimum number in an array and then find the sum of it and difference of it.

CODE:

import java.util.Arrays;

import java.util.Scanner;

public class MaxMinSumDifference {

public static void main(String[] args) {

Scanner scanner = new Scanner(System.in);

// Input array size and elements

System.out.print("Enter the size of the array: ");

int size = scanner.nextInt();

int[] array = new int[size];

System.out.println("Enter the elements of the array:");

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

array[i] = scanner.nextInt();

}

// Input M and N

System.out.print("Enter the value of M (for Mth maximum): ");

int M = scanner.nextInt();

System.out.print("Enter the value of N (for Nth minimum): ");

int N = scanner.nextInt();

// Sort the array

Arrays.sort(array);

// Finding Mth maximum number

int mthMax = array[Math.max(0, size - M)];

// Finding Nth minimum number

int nthMin = array[Math.min(N - 1, size - 1)];

// Calculating sum and difference

int sum = mthMax + nthMin;

int difference = mthMax - nthMin;

// Output

System.out.println("Mth maximum number: " + mthMax);

System.out.println("Nth minimum number: " + nthMin);

System.out.println("Sum: " + sum);

System.out.println("Difference: " + difference);

}

}

OUTPUT:

C:\javap>javac MaxMinSumDifference.java

C:\javap>java MaxMinSumDifference

Enter the size of the array: 8

Enter the elements of the array:

9 8 7 6 5 4 3 2

Enter the value of M (for Mth maximum): 8

Enter the value of N (for Nth minimum): 2

Mth maximum number: 2

Nth minimum number: 3

Sum: 5

Difference: -1

