Lab 2

One dimensional array

Task 1

Write a program that asks a user to input an integer n. The program should prompt the user to input n integers and store them in an one-dimensional array. Then the program should output only positive integers in the array.

INPUT	OUTPUT
3 4 9 -2	4 9
10 6 19 26 -3 46 8 5 -65 90 25	6 19 26 46 8 5 90 25

Task 2

Write a program that asks a user to input an integer n. The program should prompt the user to input n integers and store them in an one-dimensional array. Then the program should output the minimum, maximum and their indexes elements.

INPUT	OUTPUT
3	Min:2 Index:2
4 9 2	Max:9 Index:1

Task 3

Write a program that asks a user to input an integer n. The program should prompt the user to input n integers and store them in an one-dimensional array. Then the program should swap the minimum with maximum and output the array.

INPUT	OUTPUT
3 4 9 2	4 2 9
10 6 19 26 9 46 8 5 65 90 25	6 19 26 9 46 8 90 65 5 25

Task 4

Write a program that asks a user to input an integer n. The program should prompt the user to input n integers and store them in an one-dimensional array. Then the program should output firstly positive elements, then zero element and at last negative elements.

INPUT	OUTPUT
4 9 -2 4 0	9 4 0 -2
10 6 19 0 -3 4 8 0 -6 9 5	6 19 4 8 9 5 0 0 -3 -6

Task 5

Write a program that asks a user to input an integer n. The program should prompt the user to input n integers and store them in an one-dimensional array. Then the program should output the product of all non-zero elements in the array.

INPUT	OUTPUT
4 9 2 4 0	72
10 6 19 0 -3 4 8 0 -6 9 5	2954880

Task 6

Write a program that asks a user to input an integer n. The program should prompt the user to input n integers and store them in an one-dimensional array. Then the program should output the geometric mean of all non-zero elements in the array.

INPUT	OUTPUT
4 9 2 4 0	4.16017
10 6 19 0 -3 4 8 0 -6 9 5	6.43899

Task 7

Write a program that asks a user to input an integer n. The program should prompt the user to input n integers and store them in an one-dimensional array. Further, the program should read an integer m. The program should output the number of elements in the array that are greater than m.

INPUT	OUTPUT
4 9 -2 4 0	3

1

10 4
6 19 0 -3 4 8 0 -6 9 5
5

For Homework:

Task 1

Write a program that asks a user to input an integer n. The program should prompt the user to input n integers and store them in an one-dimensional array. Then the program should find the sum of elementsbetween two zeros.

INPUT	**OUTPUT**
4 0 -2 4 0	2
10 6 19 0 -3 4 8 0 -6 9 5	9

Task 2

Write a program that asks a user to input an integer n. The program should prompt the user to input n integers and store them in an one-dimensional array. Then the program should prompt the user an integer m and output the “Yes” and index of the integer m in the array, otherwise output “No”.

INPUT	**OUTPUT**
3 4 9 2 8	No
10 6 19 26 3 46 8 5 65 90 25 46	Yes Index:4

Task 3

Write a Java program to find the second largest element in an array.

Task 4

Time sorting

From input your program have to read N (1<=N<=100) - the total number of time interval than have to be sorted. Each line contains data in following format HH MM SS
HH (hours) - from 0 to 23
MM (minutes) - from 0 to 60
SS (seconds) - from 0 to 60

The output have to contain time intervals in nondescending order in give format.

Input sample:
4
10 20 30

7 30 00
23 59 59
13 30 30

Output sample:
7 30 0
10 20 30
13 30 30
23 59 59

ArrayList

1) Write a Java program to convert an array to an ArrayList.

2) Write a Java program to convert an ArrayList to an array.

3) Write a Java program to search for an element in an array list.

4) Write a Java program that swaps two elements in an array list.