1. program to initialize an integer array and print the sum and average of the array.   
import java.util.Scanner;

public class Java {

public static void main(String[] args) {

System.out.println("How many numbers you want to enter?");

Scanner scanner = new Scanner(System.in);

int n = scanner.nextInt();

double[] arr = new double[n];

double total = 0;

for(int i=0; i<arr.length; i++){

System.out.print("Enter Element No."+(i+1)+": ");

arr[i] = scanner.nextDouble();

}

scanner.close();

for(int i=0; i<arr.length; i++){

total = total + arr[i];

}

double average = total / arr.length;

System.out.format("The average is: %.3f", average);

}

}

2.program to initialize an integer array and find the maximum and minimum value of an array

class MinMax {

public static void main(String args[]){

int array[] = new int[]{10, 11, 88, 2, 12, 120};

int max = getMax(array);

System.out.println("Maximum Value is: "+max);

int min = getMin(array);

System.out.println("Minimum Value is: "+min);

}

public static int getMax(int[] inputArray){

int maxValue = inputArray[0];

for(int i=1;i < inputArray.length;i++){

if(inputArray[i] > maxValue){

maxValue = inputArray[i];

}

}

return maxValue;

}

public static int getMin(int[] inputArray){

int minValue = inputArray[0];

for(int i=1;i<inputArray.length;i++){

if(inputArray[i] < minValue){

minValue = inputArray[i];

}

}

return minValue;

}

}

3.Write a program to initialize an integer array with values and check if a given number is present in the array or not.

public static void main(String[] args) {

int[] num = {1, 2, 3, 4, 5};

int toFind = 3;

boolean found = false

for (int n : num) {

if (n == toFind) {

found = true;

break;

}

}

if(found)

System.out.println(n[ num] );

else

System.out.println("-1");

}

}

4.Initialize an integer array with ascii values and print the corresponding character values in a single row  
public class AsciiToCharacter

{

public static void main(String[] args)

{

char c; //Character Variable Declaration

for(int i=65;i<=90;i++)

{

c =(char)i;

System.out.println(i+" = "+c);

}

}

}

5.program to find the largest 2 numbers and the smallest 2 numbers in the given array

import java.io.\*;

class TwoSmallest

{

static void print2Smallest(int arr[])

{

int first, second, arr\_size = arr.length;

if (arr\_size < 2)

System.out.println(" Invalid Input ");

return;

}

first = second = Integer.MAX\_VALUE;

for (int i = 0; i < arr\_size ; i ++)

{

if (arr[i] < first)

{

second = first;

first = arr[i];

}

else if (arr[i] < second && arr[i] != first)

second = arr[i];

}

if (second == Integer.MAX\_VALUE)

System.out.println("There is no second" + "smallest element");

else

System.out.println("The smallest element is " + first + " and second Smallest" + " element is " + second);

}

5 b .Largest two numbers:

import java.util.Scanner;

public class Two largest

{

public static void main (String[] args)

{

Scanner scn = new Scanner (System.in);

System.out.print("Enter no. of elements you want in array:");

int n = scn.nextInt();

int array[] = new int[n];

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

for (int i = 0; i < array.length; i++)

{

array[i] = scn.nextInt();

}

int largest1, largest2, temp;

largest1 = array[0];

largest2 = array[1];

if (largest1 < largest2)

{

temp = largest1;

largest1 = largest2;

largest2 = temp;

}

for (int i = 2; i < array.length; i++)

{

if (array[i] > largest1)

{

largest2 = largest1;

largest1 = array[i];

}

else if (array[i] > largest2 && array[i] != largest1)

{

largest2 = array[i];

}

}

System.out.println ("The First largest is " + largest1);

System.out.println ("The Second largest is " + largest2);

}

}

6. Write a program to initialize an array and print them in a sorted fashion

**public** **class** Sort {

**public** **static** **void** main(String[] args) {

        //Initialize array

**int** [] arr = **new** **int** [] {5, 2, 8, 7, 1};

**int** temp = 0;

        //Displaying elements of original array

        System.out.println("Elements of original array: ");

**for** (**int** i = 0; i < arr.length; i++) {

            System.out.print(arr[i] + " ");

        }

        //Sort the array in ascending order

**for** (**int** i = 0; i < arr.length; i++) {

**for** (**int** j = i+1; j < arr.length; j++) {

**if**(arr[i] > arr[j]) {

                   temp = arr[i];

                   arr[i] = arr[j];

                   arr[j] = temp;

               }

            }

        }

        System.out.println();

        //Displaying elements of array after sorting

        System.out.println("Elements of array sorted in ascending order: ");

**for** (**int** i = 0; i < arr.length; i++) {

            System.out.print(arr[i] + " ");

        }

    }

}

7. Write a program to remove the duplicate elements in an array and print

**public** **class** RemoveDuplicate{

**public** **static** **int** removeDuplicateElements(**int** arr[], **int** n){

**if** (n==0 || n==1){

**return** n;

        }

**int**[] temp = **new** **int**[n];

**int** j = 0;

**for** (**int** i=0; i<n-1; i++){

**if** (arr[i] != arr[i+1]){

                temp[j++] = arr[i];

            }

         }

        temp[j++] = arr[n-1];

        // Changing original array

**for** (**int** i=0; i<j; i++){

            arr[i] = temp[i];

        }

**return** j;

    }

**public** **static** **void** main (String[] args) {

**int** arr[] = {10,20,20,30,30,40,50,50};

**int** length = arr.length;

        length = removeDuplicateElements(arr, length);

        //printing array elements

**for** (**int** i=0; i<length; i++)

           System.out.print(arr[i]+" ");

    }

}

8. Write a program to print the element of an array that has occurred the highest number of times

import java.util.\*;

class Group {

static int mostFrequent(int arr[], int n)

{

Arrays.sort(arr);

int max\_count = 1, res = arr[0];

int curr\_count = 1;

for (int i = 1; i < n; i++)

{

if (arr[i] == arr[i - 1])

curr\_count++;

else

{

if (curr\_count > max\_count)

{

max\_count = curr\_count;

res = arr[i - 1];

}

curr\_count = 1;

}

}

if (curr\_count > max\_count)

{

max\_count = curr\_count;

res = arr[n - 1];

}

return res;

}

public static void main (String[] args) {

int arr[] = {1, 5, 2, 1, 3, 2, 1};

int n = arr.length;

System.out.println(mostFrequent(arr,n));

}

}

9. Write a program to print the sum of the elements of the array with the given below condition. If the array has 6 and 7 in succeeding orders, ignore 6 and 7 and the numbers between them for the calculation of sum.

import java.util.Scanner;

public class Alpha{

public static void main(String[] args) {

int n;

Scanner sc = new Scanner(System.in);

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

n = sc.nextInt();

int arr[] = new int[n];

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

arr[i] = sc.nextInt();

}

sc.close();

int num1 = 6;

int num2 = 7;

int sum = 0;

boolean flag = false;

for(int i : arr){

if(i == num1){

flag = true;

}

if(flag == true){

if(i == num2){

flag = false;

}

continue;

}

else{

if(i == 7 ){

sum += 6+i;

}

else

sum += i;

}

}

System.out.println("sum is "+sum);

}

}

10. Write a program to reverse the elements of a given 2\*2 array. Four integer numbers needs to be passed as Command Line arguments.

public class Alpha2 {

public static void main(String args[])

{

int a=args.length;

int x,y,w,z,i;

int arr[][] = new int[4][4];

if(a<4)

{

System.out.println("enter 4 values");

}

if(a==4)

{

int k=0;

for(i=0;i<2;i++)

{

for(int j=0;j<2;j++)

{

arr[i][j]=Integer.parseInt(args[k]);

k++;

}

}

System.out.println("The given array is:");

for(i=0;i<2;i++)

{

for(int j=0;j<2;j++)

{

System.out.print(arr[i][j]+" ");

}

System.out.println();

}

System.out.println("The reverse of array is:");

for(i=1;i>=0;i--)

{

for(int j=1;j>=0;j--)

{

System.out.print(arr[i][j]+" ");

}

System.out.println();

}

}

}

}

11. Write a program to find greatest number in a 3\*3 array. The program is supposed to receive 9 integer numbers as command line arguments.

class Beta

{

static int arr[] = {10, 324, 45, 90, 9808};

static int largest()

{

int i;

int max = arr[0];

for (i = 1; i < arr.length; i++)

if (arr[i] > max)

max = arr[i];

return max;

}

public static void main(String[] args)

{

System.out.println("Largest in given array is " + largest());

}

}