1)calculate marks

using System;

class HelloWorld {

static void Main() {

int n,i,sum=0;

Console.WriteLine("Enter number");

n=Convert.ToInt32(Console.ReadLine());

int[]a=new int[n];

Console.WriteLine("Enter" +n +"element");

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

{

a[i]=Convert.ToInt32(Console.ReadLine());

sum=sum+a[i];

}

Console.WriteLine("\n Elements are \n");

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

{

Console.Write(" " +a[i]);

}

double per=sum/n;

Console.WriteLine("sum=" +sum +"per=" +per);

}

}

2)min and max

using System;

class HelloWorld {

static void Main() {

int n, i, max, min;

Console.WriteLine("Enter number");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n];

Console.WriteLine("Enter " + n + " elements");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

Console.WriteLine("\nElements are");

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

Console.Write(" " + a[i]);

}

// Initialize max and min with the first element of the array

max = min = a[0];

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

if (a[i] > max) {

max = a[i];

}

if (a[i] < min) {

min = a[i];

}

}

Console.WriteLine("\nMax = " + max);

Console.WriteLine("\nMin = " + min);

}

}

3)prime number

using System;

class HelloWorld {

static void Main() {

int n,range,i,j,div=0;

Console.WriteLine("Enter size of arry:");

range=Convert.ToInt32(Console.ReadLine());

int []a=new int[range];//arry creation

Console.WriteLine("Enter "+ range + " element");

for(i=0;i<range;i++){

a[i]=Convert.ToInt32(Console.ReadLine());

}

Console.Write("Arry element are " );

for(i=0;i<range;i++){

Console.WriteLine(a[i]+"\t");

}

Console.WriteLine("\nprime element from an Arry");

for(j=0;j<range;j++)

{

n=a[j];//n1=in

div=0;

for(i=2;i<=(n/2);i++){

if(n%i==0){

div=1;

break;

}

}

if(div==0)

Console.WriteLine(a[j]+"\t");

}

}

}

4)perfect

using System;

class HelloWorld {

static void Main() {

int range, i, j, sum;

Console.WriteLine("Enter size of array:");

range = Convert.ToInt32(Console.ReadLine());

int[] a = new int[range]; // Array creation

Console.WriteLine("Enter " + range + " elements:");

for (i = 0; i < range; i++) {

a[i] = Convert.ToInt32(Console.ReadLine());

}

Console.Write("Array elements are: ");

for (i = 0; i < range; i++) {

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nPerfect elements from the array:");

for (j = 0; j < range; j++) {

int n = a[j];

sum = 0;

for (i = 1; i <= n / 2; i++) {

if (n % i == 0) {

sum += i;

}

}

if (sum == n && n != 0) {

Console.WriteLine(n + "\t");

}

}

}

}

5)pronic

using System;

class HelloWorld {

static void Main() {

int n,i,j,range;

Console.WriteLine("Enter array size");

range=Convert.ToInt32(Console.ReadLine());

int [] a = new int[range];//array creation

Console.WriteLine("Enter "+ range +" Elements");

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

{

a[i]=Convert.ToInt32(Console.ReadLine());

}

Console.WriteLine("Array elements are");

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

{

Console.Write(a[i]+"\t");

}

Console.WriteLine("\nPronic elements from an Array");

for(j=0;j<range;j++)

{

n=a[j];

int div=0;

for(i=2;i<=(n/2);i++)

{

if(n==(i\*(i+1)))

{

div=1;break;

}

}

if(div==1)

Console.WriteLine(a[j]+"\t");

}

}

}

6)palidrom

using System;

class HelloWorld {

static void Main() {

int range, i, j, n1 = 0, p, rev;

Console.WriteLine("Enter size of array:");

range = Convert.ToInt32(Console.ReadLine());

int[] a = new int[range]; // Array creation

Console.WriteLine("Enter " + range + " elements:");

for (i = 0; i < range; i++) {

a[i] = Convert.ToInt32(Console.ReadLine());

}

Console.Write("Array elements are: ");

for (i = 0; i < range; i++) {

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nPalindrome elements from the array:");

for (j = 0; j < range; j++) {

int n = a[j];

p = n;

rev = 0;

while (n > 0) {

n1 = n % 10;

rev = (rev \* 10) + n1;

n = n / 10;

}

if (p == rev) {

Console.WriteLine(p + "\t");

}

}

}

}

7)Armstrong

using System;

class HelloWorld {

static void Main() {

int range, i, j, n1 = 0, p, rev;

Console.WriteLine("Enter size of array:");

range = Convert.ToInt32(Console.ReadLine());

int[] a = new int[range]; // Array creation

Console.WriteLine("Enter " + range + " elements:");

for (i = 0; i < range; i++) {

a[i] = Convert.ToInt32(Console.ReadLine());

}

Console.Write("Array elements are: ");

for (i = 0; i < range; i++) {

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nArmstrong elements from the array:");

for (j = 0; j < range; j++) {

int n = a[j];

p = n;

rev = 0;

while (n > 0) {

n1 = n % 10;

rev = rev+(n1\*n1\*n1);

n = n / 10;

}

if (rev == p) {

Console.WriteLine(p + "\t");

}

}

}

}

8)strong number

using System;

class HelloWorld {

static void Main() {

int range, i, j, n1 = 0, p, sum;

Console.WriteLine("Enter size of array:");

range = Convert.ToInt32(Console.ReadLine());

int[] a = new int[range]; // Array creation

Console.WriteLine("Enter " + range + " elements:");

for (i = 0; i < range; i++) {

a[i] = Convert.ToInt32(Console.ReadLine());

}

Console.Write("Array elements are: ");

for (i = 0; i < range; i++) {

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nStrong elements from the array:");

for (j = 0; j < range; j++) {

int n = a[j];

p = n;

sum = 0;

while (n > 0) {

n1 = n % 10;

// Factorial calculation

int fact = 1;

for (int k = 1; k <= n1; k++) {

fact =fact \* k;

}

sum =sum + fact;

n = n / 10;

}

if (sum == p) {

Console.WriteLine(p + "\t");

}

}

}

}

9) Dissorium

using System;

class HelloWorld {

static void Main() {

int range, i, j;

Console.WriteLine("Enter size of array:");

range = Convert.ToInt32(Console.ReadLine());

int[] a = new int[range]; // Array creation

Console.WriteLine("Enter " + range + " elements:");

for (i = 0; i < range; i++) {

a[i] = Convert.ToInt32(Console.ReadLine());

}

Console.Write("Array elements are: ");

for (i = 0; i < range; i++) {

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nDisarium elements from the array:");

for (j = 0; j < range; j++) {

int n = a[j];

int p = n, num = n, digits = 0, sum = 0;

// Calculate the number of digits

while (num > 0) {

digits++;

num = num / 10;

}

// Calculate if the number is a Disarium number

while (n > 0) {

int n1 = n % 10;

n = n / 10;

int f1 = 1;

for (i = 1; i <= digits; i++) {

f1 = f1 \* n1;

}

digits--;

sum = sum + f1;

}

if (sum == p) {

Console.WriteLine(p + "\t");

}

}

}

}

10)magic

using System;

class HelloWorld {

static void Main() {

int range, i, j, sum, n1 = 0;

Console.WriteLine("Enter size of array:");

range = Convert.ToInt32(Console.ReadLine());

int[] a = new int[range]; // Array creation

Console.WriteLine("Enter " + range + " elements:");

for (i = 0; i < range; i++) {

a[i] = Convert.ToInt32(Console.ReadLine());

}

Console.Write("Array elements are: ");

for (i = 0; i < range; i++) {

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nMagic elements from the array:");

for (j = 0; j < range; j++) {

int n = a[j];

int original = n;

while (n > 9) {

sum = 0;

while (n > 0) {

n1 = n % 10;

sum = sum + n1;

n = n / 10;

}

n = sum;

}

if (n == 1) {

Console.WriteLine(original + "\t");

}

}

}

}

11)xylem and phloem

using System;

class HelloWorld {

static void Main() {

int i, j, range;

Console.WriteLine("Enter array size:");

range = Convert.ToInt32(Console.ReadLine());

int[] a = new int[range]; // array creation

Console.WriteLine("Enter " + range + " elements:");

for (i = 0; i < range; i++) {

a[i] = Convert.ToInt32(Console.ReadLine());

}

Console.WriteLine("Array elements are:");

for (i = 0; i < range; i++) {

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nXylem elements from the array:");

for (j = 0; j < range; j++) {

int n = a[j];

int sume = 0, summ = 0; // Reset for each number

int num = n;

// Process each digit

while (n > 0) {

int n1 = n % 10;

if (n == num || n < 10)

sume += n1; // Sum of extreme digits

else

summ += n1; // Sum of mean digits

n = n / 10;

}

// Check if the number is Xylem

if (summ == sume) {

Console.WriteLine(num + "\t");

}

}

}

}

12)even and odd

using System;

class HelloWorld {

static void Main() {

int i,n;

Console.WriteLine("Enter size of arry:");

n=Convert.ToInt32(Console.ReadLine());

int []a=new int[n];//arry creation

Console.WriteLine("Enter "+ n + " element");

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

a[i]=Convert.ToInt32(Console.ReadLine());

}

Console.WriteLine("\n Arry element are " );

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

Console.WriteLine(a[i]+"\t");

}

Console.WriteLine("Even Elements are");

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

if(a[i]%2==0)

Console.Write(" \n"+a[i]);

}

Console.WriteLine("odd Elements are");

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

if(a[i]%2==1)

Console.Write(" \n"+a[i]);

}

}

}

13)Accept arry from user and print alternate number.

using System;

class HelloWorld {

static void Main() {

int n,i;

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // array creation

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

Console.WriteLine("\nArray elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine();

Console.WriteLine("\nAlternate elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine();

}

}

14)arrry size even(4)

using System;

class HelloWorld {

static void Main() {

int i, n, temp;

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // array creation

if (n % 2 == 0) {

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

Console.WriteLine("\nArray elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine();

// Swapping adjacent elements

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

if (i + 1 < n) {

temp = a[i];

a[i] = a[i + 1];

a[i + 1] = temp;

}

}

Console.WriteLine("\nArray after swapping adjacent elements:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine();

} else {

Console.WriteLine("Array size invalid");

}

}

}

15)Liner search(sarchi element of any arry)

using System;

class HelloWorld {

static void Main() {

int n, i, flag = 0, num;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

// Array creation

int[] a = new int[n];

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.WriteLine("\nArray elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine();

// Input the target value to search for

Console.WriteLine("Enter the element to search for:");

num = Convert.ToInt32(Console.ReadLine());

// Perform linear search

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

if (a[i] == num) {

flag = 1;

Console.WriteLine("Element found at position " + (i + 1));

break;

}

}

if (flag == 0) {

Console.WriteLine("Element not found");

}

}

}

16)Binary search

using System;

class HelloWorld {

static void Main() {

int n, i, num;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

// Array creation

int[] a = new int[n];

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.WriteLine("\nArray elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine();

// Sort the array (necessary for binary search)

Array.Sort(a);

// Print sorted array elements

Console.WriteLine("\nSorted array elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine();

// Input the target value to search for

Console.WriteLine("Enter the element to search for:");

num = Convert.ToInt32(Console.ReadLine());

int start = 0;

int end = n - 1;

int mid;

// Binary search loop

while (start <= end) {

mid = (start + end) / 2;

if (a[mid] == num) {

Console.WriteLine("Element found at index " + mid);

return; // Exit the program after finding the element

} else if (a[mid] < num) {

start = mid + 1;

} else {

end = mid - 1;

}

}

// Output if element is not found

Console.WriteLine("Element not found");

}

}

17)reverse order

using System;

class HelloWorld {

static void Main() {

int n, i;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

// Array creation

int[] a = new int[n];

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.WriteLine("\nArray elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nElements in reverse order are:");

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

Console.Write(" " + a[i]);

}

}

}

18)Array short

using System;

class HelloWorld {

static void Main() {

int n, i, j, temp = 0;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

// Sorting the array using Bubble Sort

for (i = 0; i < n - 1; i++) {

for (j = i+1; j < n ; j++) {

if (a[i] > a[j]) {

temp = a[i];

a[i] = a[j];

a[j] = temp;

}

}

}

// Print sorted array elements

Console.WriteLine("\nSorted array elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nSecond highest: " + a[n - 2]);

}

}

19)sort the element of an arry in descending order

using System;

class HelloWorld {

static void Main() {

int n, i, j, temp = 0;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

// Sorting the array using Bubble Sort

for (i = 0; i < n - 1; i++) {

for (j = i+1; j < n ; j++) {

if (a[i] < a[j]) {

temp = a[i];

a[i] = a[j];

a[j] = temp;

}

}

}

// Print sorted array elements

Console.WriteLine("\nSorted array elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nSecond highest: " + a[n - 2]);

}

}

20)java program t fined 3rd largest number

using System;

class HelloWorld {

static void Main() {

int n, i, j, temp = 0;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

// Sorting the array using Bubble Sort

for (i = 0; i < n - 1; i++) {

for (j = i+1; j < n ; j++) {

if (a[i] > a[j]) {

temp = a[i];

a[i] = a[j];

a[j] = temp;

}

}

}

// Print sorted array elements

Console.WriteLine("\nSorted array elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nThird highest No.: " + a[n - 3]);

}

}

21)find 2nd larges number in an array

using System;

class HelloWorld {

static void Main() {

int n, i, j, temp = 0;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

// Sorting the array using Bubble Sort

for (i = 0; i < n - 1; i++) {

for (j = i+1; j < n ; j++) {

if (a[i] > a[j]) {

temp = a[i];

a[i] = a[j];

a[j] = temp;

}

}

}

// Print sorted array elements

Console.WriteLine("\nSorted array elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nSecond highest: " + a[n - 2]);

}

}

22)java program to find largest number in an arry

using System;

class HelloWorld {

static void Main() {

int n, i, j, temp = 0;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

// Sorting the array using Bubble Sort

for (i = 0; i < n - 1; i++) {

for (j = i+1; j < n ; j++) {

if (a[i] > a[j]) {

temp = a[i];

a[i] = a[j];

a[j] = temp;

}

}

}

// Print sorted array elements

Console.WriteLine("\nSorted array elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nThird highest No.: " + a[n - 1]);

}

}

24)find 2nd smallest number in an array

using System;

class HelloWorld {

static void Main() {

int n, i, j, temp = 0;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

// Sorting the array using Bubble Sort

for (i = 0; i < n - 1; i++) {

for (j = i+1; j < n ; j++) {

if (a[i] < a[j]) {

temp = a[i];

a[i] = a[j];

a[j] = temp;

}

}

}

// Print sorted array elements

Console.WriteLine("\nSorted array elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nSecond smallest: " + a[n - 2]);

}

}

24)bubble

using System;

class HelloWorld {

static void Main() {

int n, i, j, temp = 0;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

// Sorting the array using Bubble Sort

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

for (j = 0; j < n-i ; j++) {

if (a[j] > a[j+1]) {

temp = a[j];

a[j] = a[j+1];

a[j+1] = temp;

}

}

}

Console.WriteLine("\n bubble short element are:");{

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

Console.WriteLine(" "+a[i]);

}

}

}

}

25)insertion

using System;

class HelloWorld {

static void Main() {

int i, j, range,temp=0;

Console.WriteLine("Enter array size");

range = Convert.ToInt32(Console.ReadLine());

int[] a = new int[range]; // array creation

Console.WriteLine("Enter " + range + " Elements");

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

{

a[i] = Convert.ToInt32(Console.ReadLine());

}

Console.WriteLine("Array elements are:");

for (i = 0; i < range; i++) {

Console.Write(a[i] + "\t");

}

for (i = 1; i < range; i++) {

temp = a[i];

j = i - 1;

while (j >= 0 && a[j] > temp) {

a[j + 1] = a[j];

j = j - 1;

}

a[j + 1] = temp;

}

Console.WriteLine("\nSorted array elements are:");

for (i = 0; i < range; i++) {

Console.WriteLine(a[i]);

}

}

}

26) Quick Sort

27) Java Program to copy all elements of one array into another array b[i]=a[i]

using System;

class HelloWorld {

static void Main() {

int n, i;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

// Array creation

int[] a = new int[n];

int[] b = new int[n];

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

b[i] = a[i];

}

// Print array elements

Console.WriteLine("\nArray elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nArray elements are:");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine();

}

}

28) Java Program to find the frequency of each element in the array

2 10 5 2 1 5

2=2

10=1

5=2

1=1

using System;

class HelloWorld {

static void Main() {

int n,i,j;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

// Array creation

int[] a = new int[n];

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.WriteLine("\nArray elements are:");

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

Console.Write(a[i] + "\t");

}

// Find frequency of each element

Console.WriteLine("\nFrequency of each element:");

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

int count = 1;

if (a[i] == -1) {

continue; // Skip if this element is already counted

}

// Count the frequency of the current element

for (j = i + 1; j < n; j++) {

if (a[j] == a[i]) {

count++;

a[j] = -1; // Mark this element as processed

}

}

// Print the frequency of the current element

Console.WriteLine(a[i] + "=" + count);

}

}

}

29) Program to left rotate the elements of an array

10 12 3 5 6

3 5 6 10 12

using System;

public class HelloWorld

{

public static void Main(string[] args)

{

//Console.WriteLine ("Try programiz.pro");

int n,i,n1,div=0,j,count=0;

Console.WriteLine ("Enter array size");

n=Convert.ToInt32(Console.ReadLine());

int []a=new int[n];//array creation

//int []b=new int[n];//array creation

Console.WriteLine ("Enter "+ n +" Elements");

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

{

a[i]=Convert.ToInt32(Console.ReadLine());

// b[i]=a[i];

}

Console.WriteLine ("\n\nLeft rotate elements are");

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

{

Console.WriteLine (""+a[i]);

}

Console.WriteLine (""+a[0]);

Console.WriteLine(""+a[1]);

}

}

30) Program to right rotate the elements of an array

10 2 3 5 6

5 6 10 2 3

public class HelloWorld

{

public static void Main(string[] args)

{

//Console.WriteLine ("Try programiz.pro");

int n,i;

Console.WriteLine ("Enter array size");

n=Convert.ToInt32(Console.ReadLine());

int []a=new int[n];//array creation

Console.WriteLine ("Enter "+ n +" Elements");

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

{

a[i]=Convert.ToInt32(Console.ReadLine());

}

Console.WriteLine ("\nRight rotate elements are");

Console.WriteLine("" + a[n - 1]);

for(i=0;i<n-1;i++)

{

Console.WriteLine (""+a[i]);

}

}

}

31) Program to print the duplicate elements of an array

2 10 5 2 1 5

o/p 2 5

using System;

public class HelloWorld

{

public static void Main(string[] args)

{

//Console.WriteLine ("Try programiz.pro");

int n,i,p,j;

Console.WriteLine ("Enter array size");

n=Convert.ToInt32(Console.ReadLine());

int []a=new int[n];//array creation

Console.WriteLine ("Enter "+ n +" Elements");

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

{

a[i]=Convert.ToInt32(Console.ReadLine());

}

p=n;

int count=0;

Console.WriteLine ("\nDuplicate elements are");

for (i = 0; i < n-1; i++)

{

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

{

// Check if two elements are equal and not the same element.

if ((a[i] == a[j]) && (i != j))

{

// If a duplicate is found, print the duplicate element.

Console.WriteLine("Duplicate Element : " + a[j]);

}

}

}

}

}

32)program to Remove Duplicate Element in an array

using System;

public class HelloWorld

{

public static void Main(string[] args)

{

int n, i, j;

Console.WriteLine("Enter array size:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

Console.WriteLine("Enter " + n + " elements:");

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

{

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Initialize count to keep track of unique elements

int count = 0;

// Loop through each element

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

{

// Check if the current element is a duplicate

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

{

if (a[i] == a[j])

{

break;

}

}

// If no duplicate was found, move element to the unique position

if (j == i)

{

a[count++] = a[i];

}

}

// Print unique elements

Console.WriteLine("\nremove dublicate elements are:");

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

{

Console.Write(a[i] + " ");

}

}

}

33) Java Program to print the elements of an array present on even position i=1 i=i+2

using System;

class HelloWorld {

static void Main() {

int n, i, j, temp = 0;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\n\nEven position array elements are");

for (i = 1; i < n; i += 2) {

Console.WriteLine(a[i] + "\t");

}

}

}

34) Java Program to print the elements of an array present on odd position

using System;

class HelloWorld {

static void Main() {

int n, i, j, temp = 0;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\n\nOdd position array elements are");

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

Console.WriteLine(a[i] + "\t");

}

}

}

35) Java Program to sum of the even elements of an array.

using System;

class HelloWorld {

static void Main() {

int n, i, j, sum = 0;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\n Even position array elements are");

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

sum += a[i];

}

Console.WriteLine("sum=" + sum);

}

}

36) Write a program to find the sum of odd no from an array

using System;

class HelloWorld {

static void Main() {

int n, i, j, sum = 0;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\n Even position array elements are");

for (i = 1; i < n; i += 2) {

sum += a[i];

}

Console.WriteLine("sum=" + sum);

}

}

37) Write a program to show perfect square numbers?

using System;

class HelloWorld {

static void Main() {

int n, i;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

Console.WriteLine("\nPerfect square numbers are:");

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

int num = a[i];

int sqrt = (int)Math.Sqrt(num);

if (sqrt \* sqrt == num) {

Console.WriteLine(num + " is a perfect square number");

}

}

}

}

38) java Program to Separate Zeros from the given Array elements.

i/p 10 67 0 678 0 32

o/p 10 67 678 32

using System;

class HelloWorld

{

static void Main()

{

int n, i, num, n1;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

// Array creation

int[] a = new int[n];

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.WriteLine("\nArray elements are:");

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

Console.Write(a[i] + "\t");

}

// Print elements that are non-zero

Console.WriteLine("\n\nElements without zeros are:");

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

{

if (a[i] != 0)

{

Console.Write(a[i] + " ");

}

}

}

}

39)java Program to remove number form array which contains Zeros elements.

i/p 10 67 203 678 450 32

o/p 67 678 32

using System;

class HelloWorld

{

static void Main()

{

int n, i, num, n1;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

// Array creation

int[] a = new int[n];

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.WriteLine("\nArray elements are:");

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

Console.Write(a[i] + "\t");

}

// Identify and print numbers between 1 and n that do not contain digit 0

Console.WriteLine("\n\nElements that do not contain digit 0 are:");

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

{

num = a[i];

n1 = 0;

while (num > 0)

{

if (num % 10 == 0)

{

n1 = 1; // Marking that the number contains 0

break;

}

num /= 10; // Divide 'num' by 10

}

if (n1 == 0)

{

Console.Write(a[i] + " ");

}

}

}

}

40) Accept n subjects mark from user store into array & calculate reuslt having

ATKT Fail also.

using System;

class HelloWorld

{

static void Main()

{

int n, i, passMark = 40;

double total = 0, percentage;

Console.WriteLine("Enter the number of subjects:");

n = Convert.ToInt32(Console.ReadLine());

int[] marks = new int[n];

Console.WriteLine("Enter marks for " + n + " subjects:");

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

{

marks[i] = Convert.ToInt32(Console.ReadLine());

total += marks[i];

}

int atktCount = 0;

foreach (int mark in marks)

{

if (mark < passMark)

{

atktCount++;

}

}

percentage = (total / (n \* 100)) \* 100;

Console.WriteLine("Total Marks: " + total);

Console.WriteLine("Percentage: " + percentage);

if (atktCount > 0)

{

Console.WriteLine("Result: ATKT");

}

else if (percentage >= 70)

{

Console.WriteLine("Result: Distinction");

}

else if (percentage >= 40)

{

Console.WriteLine("Result: Pass");

}

else

{

Console.WriteLine("Result: Fail");

}

}

}

41) program to find second highest no without sorting

using System;

class HelloWorld {

static void Main() {

int n, i,temp=0;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

Console.Write(a[i] + "\t");

}

for (i = 0; i < n - 1; i++) {

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

if (a[i] > a[j]) {

temp = a[i];

a[i] = a[j];

a[j] = temp;

}

}

}

Console.WriteLine("\nSecond highest: " + a[n - 2]);

}

}

42) Write Java program unsorted array ,find the sum of pair component.

Arr []={50,30,10,20,40,60}

i/p 70

using System;

class HelloWorld

{

static void Main()

{

int n;

// Input size of array

Console.WriteLine("Enter size of array:");

n = Convert.ToInt32(Console.ReadLine());

int[] a = new int[n]; // Array creation

// Input array elements

Console.WriteLine("Enter " + n + " elements:");

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

{

a[i] = Convert.ToInt32(Console.ReadLine());

}

// Print array elements

Console.Write("Array elements are: ");

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

{

Console.Write(a[i] + "\t");

}

Console.WriteLine();

// Input target sum

Console.WriteLine("\nEnter the target sum:");

int targetSum = Convert.ToInt32(Console.ReadLine());

// Print pairs that sum up to the target sum

PrintPairsWithSum(a, targetSum);

}

static void PrintPairsWithSum(int[] array, int targetSum)

{

Console.WriteLine("Pairs that sum up to " + targetSum + ":");

// Loop through the array to find pairs

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

{

for (int j = i + 1; j < array.Length; j++)

{

if (array[i] + array[j] == targetSum)

{

Console.WriteLine(array[i] + " + " + array[j] + " = " + targetSum);

}

}

}

}

}

43) Merging of 2 arrays