**//Find minimum and maximum element in an array**

#include <stdio.h>

int main()

{

    int a[1000],i,n,min,max;

    printf("Enter size of the array : ");

    scanf("%d",&n);

    printf("Enter elements in array : ");

    for(i=0; i<n; i++)

    {

        scanf("%d",&a[i]);

    }

    min=max=a[0];

    for(i=1; i<n; i++)

    {

         if(min>a[i])

  min=a[i];

   if(max<a[i])

    max=a[i];

    }

     printf("minimum of array is : %d",min);

          printf("\nmaximum of array is : %d",max);

    return 0;

}

**//Implement Linear Search**

#include<stdio.h>

int main()

{

    int a[20],i,x,n;

    printf("How many elements?");

    scanf("%d",&n);

    printf("Enter array elements:n");

    for(i=0;i<n;++i)

        scanf("%d",&a[i]);

    printf("nEnter element to search:");

    scanf("%d",&x);

    for(i=0;i<n;++i)

        if(a[i]==x)

            break;

    if(i<n)

        printf("Element found at index %d",i);

    else

        printf("Element not found");

    return 0;

}

**//Sort an array in descending order.**

#include <stdio.h>

void main (){

int num[20];

int i, j, a, n;

printf("enter number of elements in an array\n");

scanf("%d", &n);

printf("Enter the elements\n");

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

scanf("%d", &num[i]);

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

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

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

a = num[i];

num[i] = num[j];

num[j] = a;

}

}

}

printf("The numbers in descending order is:\n");

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

printf("%d\n", num[i]);

}

}

**//Given a two-dimensional array of integers and a row index, return the largest element in that row.**

#include <stdio.h>

int main()

{

int r,c;

int arr[10][10];

int i = 0, j;

int max = 0;

printf("Enter the number of rows and column: \n");

scanf("%d %d",&r,&c);

printf("\nEnter the elements of the matrix: \n");

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

{

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

{

scanf("%d",&arr[i][j]);

}

}

int res[r]; //declaring the result matrix with size of array as ‘r’

while (i < r) //Check for the largest element in an array

{

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

{

if (arr[i][j] > max)

{

max = arr[i][j];

}

}

res[i] = max;

max = 0;

i++;

}

for(int i = 0; i < c; i++) //Print the largest element in an array

{

printf("Largest element in row %d is %d \n", i, res[i]);

}

return 0;

}

**//Find Transpose of a matrix**

#include <stdio.h>

int main() {

int a[10][10], transpose[10][10], r, c;

printf("Enter rows and columns: ");

scanf("%d %d", &r, &c);

// asssigning elements to the matrix

printf("\nEnter matrix elements:\n");

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

for (int j = 0; j < c; ++j) {

printf("Enter element a%d%d: ", i + 1, j + 1);

scanf("%d", &a[i][j]);

}

// printing the matrix a[][]

printf("\nEntered matrix: \n");

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

for (int j = 0; j < c; ++j) {

printf("%d ", a[i][j]);

if (j == c - 1)

printf("\n");

}

// computing the transpose

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

for (int j = 0; j < c; ++j) {

transpose[j][i] = a[i][j];

}

// printing the transpose

printf("\nTranspose of the matrix:\n");

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

for (int j = 0; j < r; ++j) {

printf("%d ", transpose[i][j]);

if (j == r - 1)

printf("\n");

}

return 0;

}

**//Perform multiplication of two matrices**

#include<stdio.h>

**int** main(){

**int** a[10][10],b[10][10],mul[10][10],r,c,i,j,k;

printf("enter the number of row=");

scanf("%d",&r);

printf("enter the number of column=");

scanf("%d",&c);

printf("enter the first matrix element=\n");

**for**(i=0;i<r;i++)

{

**for**(j=0;j<c;j++)

{

scanf("%d",&a[i][j]);

}

}

printf("enter the second matrix element=\n");

**for**(i=0;i<r;i++)

{

**for**(j=0;j<c;j++)

{

scanf("%d",&b[i][j]);

}

}

printf("multiply of the matrix=\n");

**for**(i=0;i<r;i++)

{

**for**(j=0;j<c;j++)

{

mul[i][j]=0;

**for**(k=0;k<c;k++)

{

mul[i][j]+=a[i][k]\*b[k][j];

}

}

}

//for printing result

**for**(i=0;i<r;i++)

{

**for**(j=0;j<c;j++)

{

printf("%d\t",mul[i][j]);

}

printf("\n");

}

**return** 0;

}

/**/To perform addition of two matrices.**

#include <stdio.h>  
   
int main()  
{  
   int m, n, c, d, first[10][10], second[10][10], sum[10][10];  
   
   printf("Enter the number of rows and columns of matrix**\n**");  
   scanf("%d%d", &m, &n);  
   printf("Enter the elements of first matrix**\n**");  
   
   for (c = 0; c < m; c++)  
      for (d = 0; d < n; d++)  
         scanf("%d", &first[c][d]);  
   
   printf("Enter the elements of second matrix**\n**");  
   
   for (c = 0; c < m; c++)  
      for (d = 0 ; d < n; d++)  
         scanf("%d", &second[c][d]);  
    printf("Sum of entered matrices:-**\n**");  
     
   for (c = 0; c < m; c++) {  
      for (d = 0 ; d < n; d++) {  
         sum[c][d] = first[c][d] + second[c][d];  
         printf("%d**\t**", sum[c][d]);  
      }  
      printf("**\n**");  
   }  
   
   return 0;  
}

**//Read an array of elements of size ‘n’ and find the largest and smallest number using functions**

#include <stdio.h>

int main()

{

int a[1000],i,n;

void min\_max(int [],int);

printf("Enter size of the array : ");

scanf("%d",&n);

printf("Enter elements in array : ");

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

{

scanf("%d",&a[i]);

}

min\_max(a,n);

return 0;

}

void min\_max(int a[],int n)

{

int min,max;

min=max=a[0];

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

{

if(min>a[i])

min=a[i];

if(max<a[i])

max=a[i];

}

printf("minimum of array is : %d",min);

printf("\nmaximum of array is : %d",max);

}

# //C program to count total number of vowels and consonants in a string

# #include<stdio.h>

# int main()

# {

# char s[100];

# int i,vowels=0,consonants=0;

# 

# printf("Enter the string : ");

# gets(s);

# 

# for(i=0;s[i]!='\0';i++)

# {

# if((s[i]>=65 && s[i]<=90)|| (s[i]>=97 && s[i]<=122))

# {

# 

# if(s[i]=='a'|| s[i]=='e'||s[i]=='i'||s[i]=='o'||s[i]=='u'||s[i]=='A'||s[i]=='E'||s[i]=='I'||s[i]=='O' ||s[i]=='U')

# vowels++;

# else

# consonants++;

# }

# 

# }

# printf("No of Vowels::%d\nNo of consonants::%d",vowels,consonants);

# return 0;

# }

# // Reverse the given string without using String handling functions.

# #include<stdio.h>

# #include<string.h>

# int main() {

# char str[100], temp;

# int i, j = 0;

# 

# printf("\nEnter the string :");

# gets(str);

# 

# i = 0;

# j = strlen(str) - 1;

# 

# while (i < j) {

# temp = str[i];

# str[i] = str[j];

# str[j] = temp;

# i++;

# j--;

# }

# 

# printf("\nReverse string is :%s", str);

# return (0);

# }

# // Sort strings in dictionary order

# #include <stdio.h>

# #include<string.h>

# int main()

# {

# char str[5][10],s[10];

# int i,r,iter;

# printf("enter 5 names");

# for(i=0;i<=4;i++)

# gets(str[i]);

# for(iter=1;iter<=4;iter++)

# {

# for(i=0;i<=3;i++)

# {

# r=strcmp(str[i],str[i+1]);

# if(r>0)

# {

# strcpy(s,str[i]);

# strcpy(str[i],str[i+1]);

# strcpy(str[i+1],s);

# }

# }

# }

# printf("strings in dictionary order \n");

# for(i=0;i<=4;i++)

# puts(str[i]);

# return 0;

# }

# // find total number of alphabets, digits or special character in a string using function

#include <stdio.h>

#define MAX\_SIZE 100 // Maximum string size

int main()

{

char str[MAX\_SIZE];

int alphabets, digits, others, i;

alphabets = digits = others = i = 0;

/\* Input string from user \*/

printf("Enter any string : ");

gets(str);

/\*

\* Check each character of string for alphabet, digit or special character

\*/

while(str[i]!='\0')

{

if((str[i]>='a' && str[i]<='z') || (str[i]>='A' && str[i]<='Z'))

{

alphabets++;

}

else if(str[i]>='0' && str[i]<='9')

{

digits++;

}

else

{

others++;

}

i++;

}

printf("Alphabets = %d\n", alphabets);

printf("Digits = %d\n", digits);

printf("Special characters = %d", others);

return 0;

}