**1.Write a C program to read and print elements of array.**

#include <stdio.h>

int main(){

int arr[100];

int n,i;

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

scanf("%d",&n);

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

printf("Enter an element: ");

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

}

printf("Elements are: ");

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

printf("%d ",arr[i]);

}

return 0;

}

**2.Write a C program to read and print elements in reverse order of an array.**

#include <stdio.h>

int main(){

int arr[100];

int n,i;

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

scanf("%d",&n);

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

printf("Enter an element: ");

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

}

printf("Elements are: ");

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

printf("%d ",arr[i]);

}

return 0;

}

**3.Write a C program to Linear search an element in an array.**

#include <stdio.h>

int main(){

int i,j,n,a=0,k;

printf("Enter number of terms: ");

scanf("%d",&n);

int arr[n];

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

printf("Enter an element: ");

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

}

printf("Enter the number to search: ");

scanf("%d",&k);

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

if(arr[j]==k){

printf("%d is located at index value %d",k,j);

++a;

}

}

if(a==0){

printf("Element is not present in array.");

}

return 0;

}

**4.Write a C program to Binary search an element in an array.**

#include <stdio.h>

int main(){

int n;

printf("Enter no.of elements: ");

scanf("%d",&n);

int arr[n],i,j,x,temp;

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

printf("enter: ");

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

}

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

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

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

temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

}

printf("enter the element to search: ");

scanf("%d",&x);

int y=n-1;

i=y/2;

while((i>=0)&(i<=n)){

if(arr[i]==x){

printf("the location of the element is: %d",i);

return 0;

}

if(arr[i]>x){

i-=i/2;

}

else if(arr[i]<x){

i+=i/2;

}

}

printf("the element does not exist");

return 0;

}

**5.Write a C program to sort array elements in ascending or descending order.**

#include <stdio.h>

int main(){

int i,j,n,temp;

int a[10];

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

scanf("%d",&n);

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

printf("Enter an element: ");

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

}

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

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

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

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

}

printf("Ascending Order of elements are: ");

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

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

}

}

**Or**

#include <stdio.h>

int main(){

int i,j,n,temp;

int a[10];

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

scanf("%d",&n);

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

printf("Enter an element: ");

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

}

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

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

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

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

}

printf("Descending Order of elements are: ");

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

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

}

}

**6.Write a C program to add two matrices.**

#include <stdio.h>

int main(){

int n,i,j;

printf("Enter type of matrix: ");

scanf("%d",&n);

int a[100][100]={};

int b[100][100]={};

int c[100][100]={};

printf("Enter first matrix: \n");

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

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

printf("Enter an element: ");

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

}

printf("\n");

}

printf("Enter second matrix: \n");

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

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

printf("Enter an element: ");

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

}

printf("\n");

}

printf("Resultant matrix: \n");

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

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

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

}

printf("\n");

}

return 0;

}

**7.Write a C program to Multiplication two matrices.**

#include <stdio.h>

int main(){

int n,i,j;

printf("Enter type of matrix: ");

scanf("%d",&n);

int a[100][100]={};

int b[100][100]={};

int c[100][100]={};

printf("Enter first matrix: \n");

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

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

printf("Enter an element: ");

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

}

printf("\n");

}

printf("Enter second matrix: \n");

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

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

printf("Enter an element: ");

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

}

printf("\n");

}

printf("Resultant matrix: \n");

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

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

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

}

printf("\n");

}

return 0;

}

**8.Write a C Program to Reverse the given string without using String handling functions.**

#include <stdio.h>

#include <stdlib.h>

int main(){

char arr[100],Temp=0;

int n=0;

printf("\nEnter the string: ");

gets(arr);

while(arr[n++]!='\0');

n-=2;

printf("Reverse string is: ");

while(n>=0){

printf("%c",arr[n]);

n--;

}

return 0;

}

**9.Write a C Program to Sort strings in dictionary order.**

#include <stdio.h>

#include <string.h>

int main(){

int n,i,j;

printf("enter no.of strings: ");

scanf("%d",&n);

char\* str[n][101],tempstr[101];

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

printf("\nenter a string: ");

scanf("%100s",str[i]);

}

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

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

if(strcmp(str[i],str[j])>0){

strcpy(tempstr,str[i]);

strcpy(str[i],str[j]);

strcpy(str[j],tempstr);

}

}

}

printf("alphabetical order of the strings: \n");

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

printf("%s\n",str[i]);

}

return 0;

}

**10.Write a C Program to find total number of alphabets, vowels, digits or special character in a string using function.**

#include <stdio.h>

#include <ctype.h>

char str[101];

int avds();

int main(){

printf("Enter a string: ");

scanf("%100s",str);

avds();

return 0;

}

int avds(){

char\* vow[10]={"a","e","i","o","u","A","E","I","O","U"};

int i=0,j,a=0,v=0,d=0,s=0;

for(i=0;str[i]!='\0';i++){

for(j=0;j<10;j++){

if(str[i]==\*vow[j]){

v++;

}

}

if(isalpha(str[i])){

a++;

}

if(isdigit(str[i])){

d++;

}

if((isalpha(str[i])==0)&(isdigit(str[i])==0)){

s++;

}

}

printf("Total no.of\n");

printf("Alphabets: %d\n",a);

printf("Vowels: %d\n",v);

printf("Digits: %d\n",d);

printf("Special characters: %d\n",s);

return 0;

}