Ans1)

#include<stdio.h>

void array(int arr[],int n){

int i;

printf("The Elements are:\n");

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

printf("Element %d:",i+1);

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

}

}

void linear(int arr[]){

int i,n,k;

printf("Neter the element you want to search:\n");

scanf("%d", &k);

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

//if they are equal

if(k==arr[i]){

printf("The element is found and it is at %d place and its value is %d\n", i+1,k);

}

}

printf("Element not found....");

}

int main()

{

int arr[50],n;

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

scanf("%d",&n);

array(arr,n);

linear(arr);

return 0;

}

Ans2)

#include<stdio.h>

void array(int arr[], int n){

int i;

printf("Enter the elements in th array and it should be sorted:\n");

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

printf("Element %d:",i);

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

}

}

void binary(int arr[]){

int start,n,end,k,i,middle;

printf("Enter th element you want to search:\n");

scanf("%d", &k);

start=0;

end =n-1;

middle = (start + end)/2;

while(start<=end){

if(arr[middle]<k){

start = middle+1;

}

else if(arr[middle]==k){

printf("%d found at %d place.",k,middle+1);

break;

}

else{

end = middle-1;

middle = (start + end)/2;

}

}

if(start>end){

printf("Element not found...");

}

}

int main(){

int arr[50],n;

printf("enter the size of aray:\n");

scanf("%d",&n);

array(arr,n);

binary(arr);

return 0;

}

Ans3)

#include<stdio.h>

void array(int arr[], int n){

int i;

printf("Enter the elements in th array and it should be sorted:\n");

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

printf("Element %d:",i);

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

}

}

void add(int arr[],int n){

int k,pos,i;

printf("Enter the element you want to add:\n");

scanf("%d", &k);

printf("Enter the position:\n");

scanf("%d", &pos);

n=n+1;

for(i=n;i>=pos+1;i--){

arr[i]=arr[i-1];

}

arr[pos]=k;

printf("The array is:\n");

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

printf("Element %d:%d\n", i,arr[i]);

}

}

int main(){

int arr[50],n;

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

scanf("%d",&n);

array(arr,n);

add(arr,n);

return 0;

}

Ans4)

#include<stdio.h>

void array(int arr[],int n){

int i;

printf("The Elements are:\n");

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

printf("Element %d:",i);

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

}

}

void delete(int arr[], int n){

int i, pos;

printf("Enter the position:\n");

scanf("%d", &pos);

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

arr[i]=arr[i+1];

}

printf("The new array is:\n");

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

printf("Element %d:%d\n", i,arr[i]);

}

}

int main(){

int arr[50],n;

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

scanf("%d",&n);

array(arr,n);

delete(arr,n);

return 0;

}

Ans5)

#include<stdio.h>

void read(int arr[][10],int n){

int i,j;

printf("Enter the numbers of matrix:\n");

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

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

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

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

}

}

}

void display(int arr[][10],int n){

int i,j;

printf("The matrix is :\n");

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

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

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

}

printf("\n");

}

}

void multiply(int arr[][10],int arr1[][10],int n){

int c[10][10],i,j,k;

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

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

c[i][j]=0;

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

c[i][j]+=arr[i][k]\*arr1[k][i];

}

}

}

printf("The multiplication of these two matrix is:\n");

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

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

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

}

printf("\n");

}

}

int main(){

int i,n,j,a[10][10],b[10][10],c[10][10],k;

printf(“Enter the value of n:\n”);

scanf(“%d”,&n);

read(a,n);

display(a,n);

read(b,n);

display(b,n);

multiply(a,b,);

return 0;

}

Ans6)

#include<stdio.h>

void read(int arr[][10],int n){

int i,j;

printf("Enter the numbers of matrix:\n");

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

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

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

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

}

}

}

void display(int arr[][10],int n){

int i,j;

printf("The matrix is :\n");

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

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

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

}

printf("\n");

}

}

void transpose(int arr1[][10],int arr[][10]){

int i,j,k,int n;

n=3;

printf("The transpose of the matrix:\n");

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

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

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

arr1[i][k]=arr[k][i];

printf("%d ",arr1[i][k]);

}

}

printf("\n");

}

}

int main(){

int a[10][10],c[10][10],n;

printf(“Enter value of n:\n”);

scanf(“%d”, &n);

read(a,n);

display(a,n);

transpose(c,n);

}

Ans7)

#include<stdio.h>

void read(int arr[][10],int n){

int i,j;

printf("Enter the numbers in the matrix:\n");

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

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

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

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

}

}

printf("The matrix is:\n");

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

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

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

}

printf("\n");

}

}

void upper(int arr[][10],int n){

int i,j,flag;

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

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

if(arr[i][j]==0){

flag=-1;

}else{

flag=0;

}

}

}

}

int main(){

int n,a[10][10],flag=0;

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

scanf("%d", &n);

read(a,n);

upper(a,n);

if(flag=-1){

printf("Matrix is upper triangular.....");

}else{

printf("Matrix is not upper triangular...");

}

}