

Array Program Code:

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#include <stdio.h>

#include <stdlib.h>

int arr[100];

int i, x, pos, n, a, b;

void main()
{

    printf(" enter the number of elements:");
    scanf("%d",&n);
    printf("\nenter the elements:");
    for (i = 0; i < n; i++)
        scanf("%d",&arr[i]);
    while(1){
        printf("\n please choose an operation from below\n 1.Traversal\n
2.Insertion\n 3.Deletion\n 4.Searching\n 0. Exit ");
        scanf("%d",&a);
        switch(a){
            case 1 : traversal(arr,n);
                break;
            case 2 : n=insert(&arr,n);
                break;
            case 3 : delete1(&arr,n);
                break;
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        case 4 : search(arr,n);
                break;
        case 0 : exit(0);

        default : printf(" wrong input\n");
                break;

    }
}
}

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void traversal(){
    int i;

    printf(" \n the elements are:");

    for (i = 0; i < n; i++)
        printf("%3d ", arr[i]);

    printf("\n");
}

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int insert(int *arr,int n){
    int i,x,pos ;

    printf("enter the elements to be insert\n");

    scanf("%d",&x);

    for(i=0;i<n;i++){
        printf("%d--",arr[i]);
    }
}

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    }
    printf("\n");
    printf("enter the position of the element to insert\n");
    scanf("%d",&pos);
    n++;
    for (i = n-1; i >= pos; i--)
        *(arr+i) = *((arr+i)-1);
    arr[pos - 1] = x;
    printf("the resultant array is \n\n");
    for (i = 0; i < n; i++)
        printf("%3d ",*(arr+i));
    printf("\n");
    return n;
}

void delete1(int *arr,int n){
    int i,x,pos ;
    printf("Enter the location where you wish to delete element\n");
    scanf("%d", &pos);

    if (pos >= n+1)
        printf("Deletion not possible.\n");
    else
    {
        for (i = pos - 1; i < n - 1; i++)

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        *(arr+i) = *((arr+i)+1);

printf("Resultant array:");

for (i = 0; i < n - 1; i++){
    printf("%3d",*(arr+i));
}

}

}

void search(int arr[100],int n){
    int i,x,pos,b,flag=0 ;

    printf("\n enter the elements to be searched:");
    scanf("%d",&b);
    for(i=0;i<=n;i++){
        if(b==arr[i])

            flag=i;
    }
    if(flag!=0)
        printf("\n the he element %d is found at position %d\n",b,flag);
    else
        printf("not found");
}

```