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/* this is a menu driven program to insert or delete
elements to an array */
#include <stdio.h>
main()
{
    int a[20],n,ch,pos,data,i;
    // pos is used to refer position starting from 0
    printf("\n Enter total ");
    scanf("%d",&n);
    printf("\n Enter numbers ");
    for(i=0;i<n;i++)
        scanf("%d",&a[i]);

do
{
    printf("\n List .....1");
    printf("\n Insert .....2");
    printf("\n Delete .....3");
    printf("\n Exit .....4");
    printf("\n\n\n Enter your choice ");
    scanf("%d",&ch);
    switch(ch)
    {
        case 1: printf("\n\n The array elements are:");
                for(i=0;i<n;i++)
                    printf ("%d ",a[i]);
                break;

        case 2:    printf("\n Enter data to insert :");
                    scanf("%d",&data); // reading the data to be inserted
                    printf("\n Enter position (0 to %d) : ",n);
                    scanf("%d",&pos);
                    for(i=n;i>pos;i--)
                        a[i]=a[i-1];
                    a[pos]=data; //inserting the new element
                    n++;
                    break;

        case 3:    printf("\n Enter position to delete (0 to %d) : ",n-1);
                    scanf("%d",&pos);
                    for(i=pos;i<n;i++)
                        a[i]=a[i+1];
                    n--;
                    break;

        case 4:    printf ("\n Thank You ");
                    break;

        default: printf("\n Invalid choice ....\n\n");
    }

}while (ch!=4);

}

```