LINEAR ARRAY DELETION

Write a C++ program to delete an element from a linear array using the linear array deletion algorithm.

Steps:-

1. **Function deleteElement**: Deletes an element at the given position by shifting elements to the left.
2. **Function displayArray**: Prints the elements of the array.
3. **Main Function**:
    - Takes user input for the array and deletion position.
    - Calls deleteElement to remove the element.
    - Displays the updated array.

CODE:-

```cpp
#include <iostream>
using namespace std;

void deleteElement(int arr[], int &n, int pos)
 {
    if (pos < 0 || pos >= n)
{
        cout << "Invalid position!" << endl;
        return;
    }
    for (int i = pos; i < n - 1; i++) // Shifting elements to left
{
        arr[i] = arr[i + 1];
    }
    n--; // Reduce the size of the array
}

void displayArray(int arr[], int n)
 {
    for (int i = 0; i < n; i++)
{
        cout << arr[i] << " ";
    }
    cout << endl;
}

int main()
{
    int n, pos;
    cout << "Enter the number of elements in the array: ";
```

```
    cin >> n;
    int arr[n];
    cout << "Enter " << n << " elements: ";
    for (int i = 0; i < n; i++)
{
        cin >> arr[i];
    }
    cout << "Enter the position to delete (0-based index): ";
    cin >> pos;
    deleteElement(arr, n, pos);
    cout << "Array after deletion: ";
    displayArray(arr, n);
    return 0;
}


```