7. Write a C program to implement Array operations such as Insert, Delete and Display.

```
#include <stdio.h>
#define SIZE 100
int arr[SIZE];
int n = 0;
void display() {
    if (n == 0) {
        printf("Array is empty.\n");
        return;
    }
    printf("Array elements are: ");
    for (int i = 0; i < n; i++) {
        printf("%d ", arr[i]);
    }
    printf("\n");
}
void insert(int element, int pos) {
    if (n == SIZE) {
        printf("Array is full. Insertion not possible.\n");
        return;
    }
    if (pos < 0 || pos > n) {
        printf("Invalid position!\n");
        return;
    }
    for (int i = n; i > pos; i--) {
        arr[i] = arr[i - 1];
    }
    arr[pos] = element;
    n++;
    printf("Element inserted successfully.\n");
```

```
}
void delete(int pos) {
    if (n == 0) {
        printf("Array is empty. Deletion not possible.\n");
        return;
    }
    if (pos < 0 || pos >= n) {
        printf("Invalid position!\n");
        return;
    }
    printf("Deleted element: %d\n", arr[pos]);
    // Shift elements to the left
    for (int i = pos; i < n - 1; i++) {
        arr[i] = arr[i + 1];
    }
    n--;
}
int main() {
    int choice, element, pos;
    while (1) {
        printf("\n--- Array Operations Menu ---\n");
        printf("1. Insert\n");
        printf("2. Delete\n");
        printf("3. Display\n");
        printf("4. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);
        switch (choice) {
            case 1:
                printf("Enter element to insert: ");
                scanf("%d", &element);
```

```
            printf("Enter position (0 to %d): ", n);
            scanf("%d", &pos);
            insert(element, pos);
            break;
        case 2:
            printf("Enter position to delete (0 to %d): ", n - 1);
            scanf("%d", &pos);
            delete(pos);
            break;
        case 3:
            display();
            break;
        case 4:
            printf("Exiting program.\n");
            return 0;
        default:
            printf("Invalid choice! Please try again.\n");
    }
  }
}
```