#include <stdio.h>

#define MAX\_SIZE 100

int main() {

int arr[MAX\_SIZE];

int n = 0, choice, pos, value;

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: // Insert

if (n >= MAX\_SIZE) {

printf("Array is full. Cannot insert.\n");

break;

}

printf("Enter position (0 to %d): ", n);

scanf("%d", &pos);

if (pos < 0 || pos > n) {

printf("Invalid position.\n");

break;

}

printf("Enter value to insert: ");

scanf("%d", &value);

for (int i = n; i > pos; i--) {

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

}

arr[pos] = value;

n++;

printf("Inserted successfully.\n");

break;

case 2: // Delete

if (n == 0) {

printf("Array is empty. Nothing to delete.\n");

break;

}

printf("Enter position to delete (0 to %d): ", n - 1);

scanf("%d", &pos);

if (pos < 0 || pos >= n) {

printf("Invalid position.\n");

break;

}

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

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

}

n--;

printf("Deleted successfully.\n");

break;

case 3: // Display

if (n == 0) {

printf("Array is empty.\n");

} else {

printf("Array elements: ");

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

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

}

printf("\n");

}

break;

case 4: // Exit

printf("Exiting program.\n");

return 0;

default:

printf("Invalid choice. Please try again.\n");

}

}

}