#include <stdio.h>

#define SIZE 100

int main() {

int arr[SIZE], n = 0, choice, pos, val;

while (1) {

printf("\nArray Operations Menu:\n");

printf("1. Insert\n2. Delete\n3. Display\n4. Exit\n");

printf("Enter your choice: ");

scanf("%d", &choice);

switch (choice) {

case 1: // Insert

if (n >= 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", &val);

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

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

arr[pos] = val;

n++;

printf("Inserted %d at position %d.\n", val, pos);

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;

}

printf("Deleted %d from position %d.\n", arr[pos], pos);

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

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

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

return 0;

default:

printf("Invalid choice. Try again.\n");

}

}

}