#include <stdio.h>

#define SIZE 100

int arr[SIZE]; // Array declaration

int n = 0; // Current size of array

// Function to display array elements

void display() {

if (n == 0) {

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

return;

}

printf("Array elements: ");

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

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

}

printf("\n");

}

// Function to insert an element at given position

void insert(int pos, int val) {

if (n >= SIZE) {

printf("Array is full. Cannot insert.\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] = val;

n++;

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

}

// Function to delete element at given position

void delete(int pos) {

if (n == 0) {

printf("Array is empty. Cannot delete.\n");

return;

}

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

printf("Invalid position!\n");

return;

}

int deleted = arr[pos];

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

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

}

n--;

printf("Deleted element %d from position %d\n", deleted, pos);

}

int main() {

int choice, pos, val;

while (1) {

printf("\n--- Array Operations Menu ---\n");

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

printf("Enter your choice: ");

scanf("%d", &choice);

switch (choice) {

case 1:

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

scanf("%d", &pos);

printf("Enter value to insert: ");

scanf("%d", &val);

insert(pos, val);

break;

case 2:

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

scanf("%d", &pos);

delete(pos);

break;

case 3:

display();

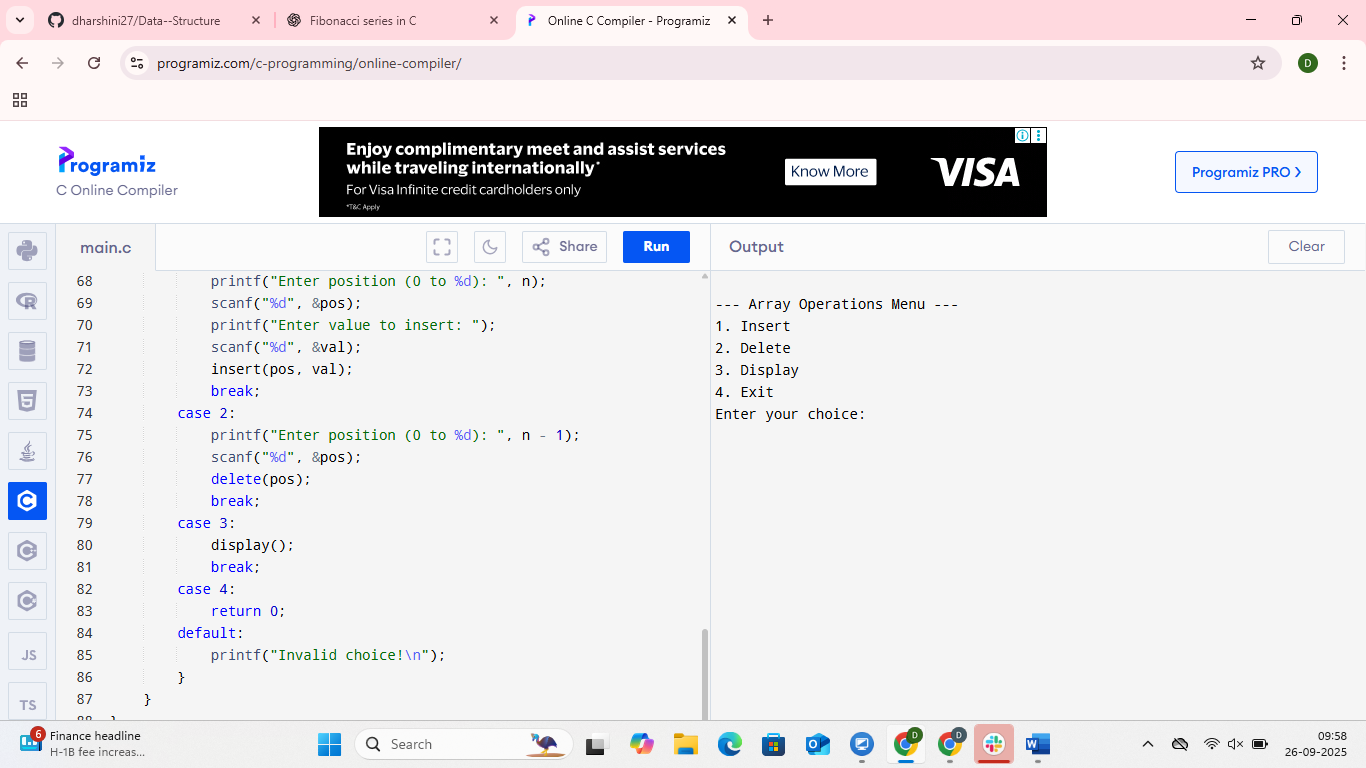
break;

case 4:

return 0;

default:

printf("Invalid choice!\n");

}

}

}