// Solution using C pointers

#include<stdio.h>

#define MAX\_SIZE 100

int main() {

int array[MAX\_SIZE];

int n, pos, value;

printf("Enter the number of elements in the array: ");

scanf("%d", &n);

printf("Enter the elements:\n");

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

scanf("%d", &array[i]);

}

printf("Enter the position where the element should be inserted: ");

scanf("%d", &pos);

switch (pos) {

case 1:

// Insert element at the beginning of the array

// Shift elements to the right

for (int i = n - 1; i >= 0; i--) {

array[i + 1] = array[i];

}

// Prompt for the value of the new element

printf("Enter the value of the new element: ");

scanf("%d", &value);

// Assign the value to the specified position

array[0] = value;

// Increment the size of the array

n++;

printf("Element inserted successfully.\n");

break;

case 2:

// Insert element at the end of the array

// Prompt for the value of the new element

printf("Enter the value of the new element: ");

scanf("%d", &value);

// Assign the value to the specified position

array[n] = value;

// Increment the size of the array

n++;

printf("Element inserted successfully.\n");

break;

default:

if (pos >= 3 && pos <= n + 1) {

// Insert element at the specified position

// Shift elements to the right

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

array[i + 1] = array[i];

}

// Prompt for the value of the new element

printf("Enter the value of the new element: ");

scanf("%d", &value);

// Assign the value to the specified position

array[pos - 1] = value;

// Increment the size of the array

n++;

printf("Element inserted successfully.\n");

} else {

printf("Invalid position.\n");

}

break;

}

printf("Updated array: ");

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

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

}

return 0;

}

Output

Enter the number of elements in the array: 4

Enter the elements:

3

5

6

7

Enter the position where the element should be inserted: 3

Enter the value of the new element: 12

Element inserted successfully.

Updated array: 3 5 12 6 7