

Array Insertion & deletion

Algorithm for inserting

1. START
2. Initialise the variables
3. Input the position to insert
4. Input the element to insert.
5. Start the for loop from the back and increment the position of elements by one till the position of new element
6. STOP.

Algorithm for deleting

1. START
2. Initialize the variables.

3. Input the position to be deleted
4. Use ~~for~~ loop to set ~~all~~ the position of all elements from the position given ~~the~~ ~~the~~ one less.
5. STOP.

Algorithm for main

1. START
2. Initialize the variables.
3. Initialize the array with its elements.
4. Call Insert function
5. Call delete function
6. STOP.

```

#include <stdio.h>

//inserting in array
void inserter(int* n, int array[]){
    int i,pos,val;
    printf("\nEnter the position to insert a value[1<x<%d]: ",*n+1);
    scanf("%d",&pos);
    if(pos==*n+1){
        printf("value to insert: ");
        scanf("%d",&val);
        array[pos-1]=val;
        *n+=1;
        printf("\nArray after insertion --> ");
        for(i=0;i<*n-1;i++){
            printf("%d , ",array[i]);
        }printf("%d\n",array[*n-1]);
    }
    else if(pos>=1 && pos<=*n){
        printf("value to insert: ");
        scanf("%d",&val);
        for(i=*n;i>pos-1;i--){
            array[i]=array[i-1];
        }
        array[i]=val;
        *n+=1;
        printf("\nArray after insertion --> ");
        for(i=0;i<*n-1;i++){
            printf("%d , ",array[i]);
        }printf("%d\n",array[*n-1]);
    }
    else
        printf("Array index out of bound!");
}

//deleting an element from array
void deleter(int *n,int array[]){
    int i,pos;
    printf("\nEnter the position to be deleted[1<x<%d]: ",*n);
    scanf("%d",&pos);

    if(pos>=1 && pos<=*n){
        for(i=pos-1;i<*n-1;i++){
            array[i]=array[i+1];
        }
        *n-=1;
        printf("Array after deletion --> ");
        for(i=0;i<*n-1;i++){
            printf("%d , ",array[i]);
        }printf("%d\n",array[*n-1]);
    }
}

```

```

    else
        printf("Array index out of bound!");
}

int main(){
    int ans=1;
    printf("Enter the array capacity: ");
    int n;
    scanf("%d",&n);
    int array[n];
    int i;
    printf("\nThen carry on with the elements now\n");
    for(i=0;i<n;i++){
        scanf("%d",&array[i]);
    }

    printf("Current Array--> ");
    for(i=0;i<n-1;i++){
        printf("%d , ",array[i]);
    }
    printf("%d\n",array[n-1]);
    while(ans!=0){
        inserter(&n,array);
        deleter(&n,array);
        printf("\n*****press 0 to exit or press 1 to continue*****\n");
        scanf("%d",&ans);
    }
}

```

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repl.it/repls/TediousAmpleNumerators#main.c

@anonymous / TediousAmpleNumera... Run

Files main.c

```
main.c
51 else
52     printf("Array index out of bound!");
53 }
54
55 int main(){
56     int ans=1;
57     printf("Enter the array capacity: ");
58     int n;
59     scanf("%d",&n);
60     int array[n];
61     int i;
62     printf("\nThen carry on with the elements now\n");
63     for(i=0;i<n;i++){
64         scanf("%d",&array[i]);
65     }
66
67     printf("Current Array--> ");
68     for(i=0;i<n-1;i++){
69         printf("%d ,",array[i]);
70     }
71     printf("%d\n",array[n-1]);
72     while(ans!=0){
73         inserter(&n,array);
74         deleter(&n,array);
75         printf("\n*****press 0 to exit or press 1 to continue*****\n");
76         scanf("%d",&ans);
77     }
78 }
```

./main
Enter the array capacity: 2
Then carry on with the elements now
3
5
Current Array--> 3 , 5
Enter the position to insert a value[1<x<3]: 3
value to insert: 5
Array after insertion --> 3 , 5 , 5
Enter the position to be deleted[1<x<3]: 0
Array index out of bound!
*****press 0 to exit or press 1 to continue*****
1
Enter the position to insert a value[1<x<4]: 1
value to insert: 5
Array after insertion --> 5 , 3 , 5 , 5
Enter the position to be deleted[1<x<4]: 4
Array after deletion --> 5 , 3 , 5
*****press 0 to exit or press 1 to continue*****
1
Enter the position to insert a value[1<x<4]: 6
Array index out of bound!
Enter the position to be deleted[1<x<3]: 3
Array after deletion --> 5 , 3
*****press 0 to exit or press 1 to continue*****
0

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