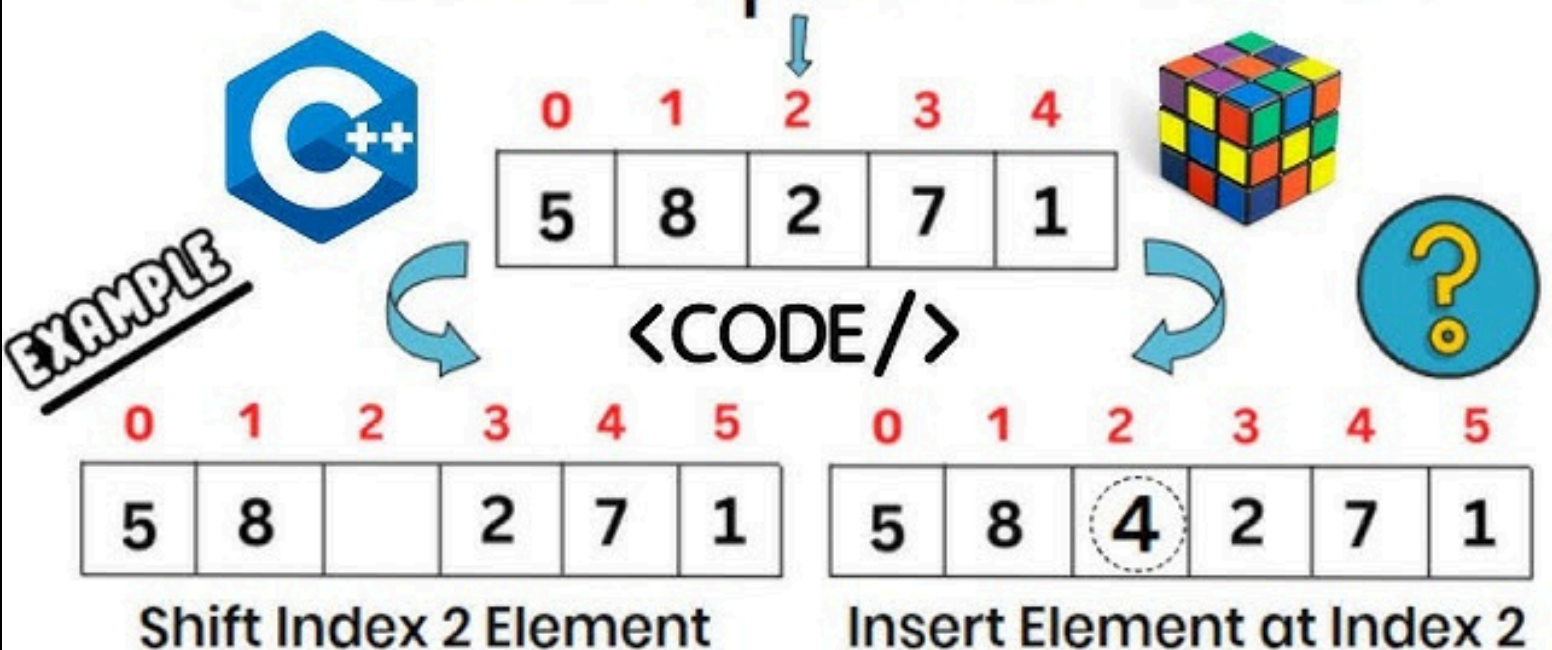




FAZAIA BILQUIS COLLEGE

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Insertion at Specific Position



Task 1 – Introduction to Arrays

SUBMITTED TO: **MA'AM SANA**

ROLL NO: **BSCS-13-F24-01**

SUBJECT: **OOPS IN JAVA**

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INTRODUCTION TO ARRAYS

Definition:

- An array in C++ is a collection of elements of the same data type stored in contiguous memory locations. It allows storing multiple values under a single variable name and accessing them using an index.

LAB TASKS

TASK 1: ROLL-CALL REVERSE (INPUT + REVERSE TRAVERSAL)

Scenario:

You noted 5 student names in the order they arrived. You want to announce them in reverse for a fun activity.

• Program:

```
program 1.cpp ×
1  #include <iostream>
2  #include <string>
3  using namespace std;
4
5  int main() {
6      string names[5];
7      cout << "Enter the 5 names (one word each): ";
8      for (int i = 0; i < 5; i++) {
9          cin >> names[i];
10     }
11     // Print in reverse
12     cout << "Reverse Order: ";
13     for (int i = 4; i >= 0; i--) {
14         cout << names[i];
15         if (i > 0) cout << " ";
16     }
17     cout << "\n";
18     return 0;
19 }
20
```

• Output:

```
C:\Users\LAB-1\Desktop\DS L × + v
Enter the 5 names (one word each): Maham
Noor
Zuni
Mahrukh
Esha
Reverse Order: Esha Mahrukh Zuni Noor Maham
```

• Code Explanation:

- We declared an array **arr** of size 5 and initialized it with values.
- A **for loop** is used to iterate through the array.
- The program prints each element of the array one by one.



TASK 2: MINI TEMPERATURE STATS (MIN, MAX, AVERAGE)

Scenario: A sensor saved temperatures for 7 hours. Find the lowest, highest, and average.

• **Program:**

```
Program2.cpp ×
1  #include <iostream>
2  #include <iomanip>
3  using namespace std;
4  int main(){
5      int t[7]; // 7 reading
6      cout<< "Enter the 7 integers temperature: ";
7      for(int i = 0; i < 7; i++){
8          cin>> t[i];
9      }
10     //Start with the first value as both min and max
11     int mn = t[0];
12     int mx = t[0];
13     int sum = 0;
14     // One pass to compute min max and sum
15     for(int i=0; i<7; i++){
16         if(t[i] < mn) mn = t[i];
17         if(t[i] > mx) mx = t[i];
18         sum += t[i];
19     }
20     double avg = sum / 7.0;
21     cout<<"Min = "<< mn << ",Max = " << mx << ",Avg = " << fixed << setprecision(2) << avg << "\n";
22     return 0;
23 }
```

• **Output:**

```
C:\Users\LAB-1\Desktop\DS L × + v
Enter the 7 integers temperature: 98
45
56
78
23
21
12
Min = 12,Max = 98,Avg = 47.57
```

• **Code Explanation:**

- An array **t[7]** stores 7 temperature readings entered by the user.
- We initialize **mn** and **mx** with the first value.
- A single loop calculates the **min**, **max**, and also adds values for the sum.
- The average is found by dividing **sum** by **7.0** (to get decimal result).

TASK 3 - LOST & FOUND SEARCH (LINEAR SEARCH + COMPARISONS)

Scenario: Security logged item IDs found on campus. A student asks if a specific ID exists. Search one by one and report the index and number of comparisons.

• Program:

Program3.cpp

```
1  #include<iostream>
2  using namespace std;
3  int main(){
4      const int CAP = 100; // capacity
5      int a[CAP];
6      int n;
7      cout<<"How many IDs? ";
8      cin>>n;
9      if(n < 0 || n > CAP){
10         cout<<"Invalid size. \n";
11         return 0;
12     }
13     cout<<"Enter "<<n<<" IDs: ";
14     for(int i = 0; i < n; i++){
15         cin >> a[i];
16     }
17     int target;
18     cout<<"Serach ID: ";
19     cin >> target;
20
21     int index = -1;
22     int comparisons = 0;
23     // Linear Search
24     for(int i = 0; i < n; i++){
25         comparisons++;
26         if(a[i] == target){
27             index = i;
28             break; //stop at first match
29         }
30     }
31     if(index != -1){
32         cout<<"Found at index " << index << " (comparisons: " << comparisons << " )\n";
33     }else{
34         cout<<"Not , Found (comparisons: " << comparisons << " ) \n";
35     }
36     return 0;
37 }
```

• Output:

```
C:\Users\LAB-1\Desktop\DS L
How many IDs? 7
Enter 7 IDs: 101
102
103
78
56
76
12
Serach ID: 101
Found at index 0 (comparisons: 1 )
```

• Code Explanation:

- The program first takes **n** IDs from the user.
- The **linear search** loop compares each ID with the target.
- If found, it reports the index and how many comparisons were made.
- If not found, it shows **"Not found"** along with the total comparisons.

TASK 4 - LIBRARY WAITLIST (INSERT AT POSITION WITH RIGHT SHIFT)

Scenario: Insert a new member ID at a given position in the library waitlist by shifting existing elements to the right.

• **Program:**

```
Program4.cpp ×
1  #include<iostream>
2  using namespace std;
3  int main(){
4      const int CAP = 30; // capacity
5      int a[CAP];
6      int n;
7      cout<<"Initial size (0.."<< CAP << " )";
8      cin>>n;
9      if(n < 0 || n > CAP){
10         cout<<"Invalid size. \n";
11         return 0;
12     }
13     cout<<"Enter "<<n<<" member IDs: ";
14     for(int i = 0; i < n; i++){
15         cin >> a[i];
16     }
17     int pos, val;
18     cout<<"Insert Position (0.." << n << "): ";
19     cin >> pos;
20     cout<<"Value to insert:";
21     cin >> val;
22
23     // Basic check capacity and valid position
24     if(n == CAP || pos < 0 || pos > n){
25         cout<<"Insert Failed (overflow or bad position). \n";
26         return 0;
27     }
28
29     // Shift right from the end toward pos
30     for(int i = n; i > pos; i--){
31         a[i] = a[i - 1];
32     }
33     a[pos] = val;
34     n++; //size increased
35     cout<<"After insert: ";
36     for(int i = 0; i < n; i++){
37         cout<<a[i]<<(i + 1<n?" ":"\n");
38     }
39     return 0;
40 }
41 }
```

• **Output:**

```
C:\Users\LAB-1\Desktop\DS L × + v
Initial size (0..30)5
Enter 5 member IDs: 101
12
23
34
45
Insert Position (0..5): 2
Value to insert:23
After insert: 101 12 23 23 34 45
```

• **Code Explanation:**

- The program first reads the initial size and the member IDs.
- The user specifies the position and the new value to insert.
- Elements from the end are shifted right one step to free the position.
- The new value is inserted, the size increases by 1, and the updated array is printed.

TASK 5: CANTEEN TOKENS – DELETE AT INDEX (LEFT SHIFT)

Scenario: The canteen queue is stored as token numbers in an array. When the student at index k is served, remove that token and shift left to close the gap.

- Program:

```
Source1.cpp X
Source1.cpp > main()
1  #include <iostream>
2  using namespace std;
3  int main()
4  {
5      const int CAP = 100;
6      int a[CAP]; // array of integers
7      int n;
8      cout << "Size: ";
9      cin >> n;
10     if (n < 0 || n > CAP){
11         cout << "Invalid size" << endl;
12         return 0;
13     }cout << "Enter " << n << " tokens: "; // read n integers
14     for (int i = 0; i < n; i++){
15         cin >> a[i]; // read an integer
16     }
17     int k;
18     cout << "Delete index (0.." << n - 1 << "): ";
19     cin >> k;
20     if (k < 0 || k >= n){
21         cout << "Invalid index" << endl;
22         return 0;
23     }
24     for (int i = k; i < n - 1; i++){// Shift Left from k
25         a[i] = a[i + 1]; // copy from right to left
26     } n--; // reduce size by 1
27     cout << "After Delete: ";
28     for (int i = 0; i < n; i++){
29         cout << a[i] << (i + 1 < n ? ' ' : '\n');
30     }
31     return 0;
32 }
```

- Output:

```
Code X
PS C:\Users\manan\Desktop\DSA Lab Tasks> cd "c:\Users\manan\Desktop\DSA Lab Tasks\" ; if ($?) { g++ Source1.cpp -o Source1 } ; if ($?) { .\Source1 }
Size: 4
Enter 4 tokens: 23
34
45
56
Delete index (0..3): 2
After Delete: 23 34 56
PS C:\Users\manan\Desktop\DSA Lab Tasks>
```

- **Code Explanation:**

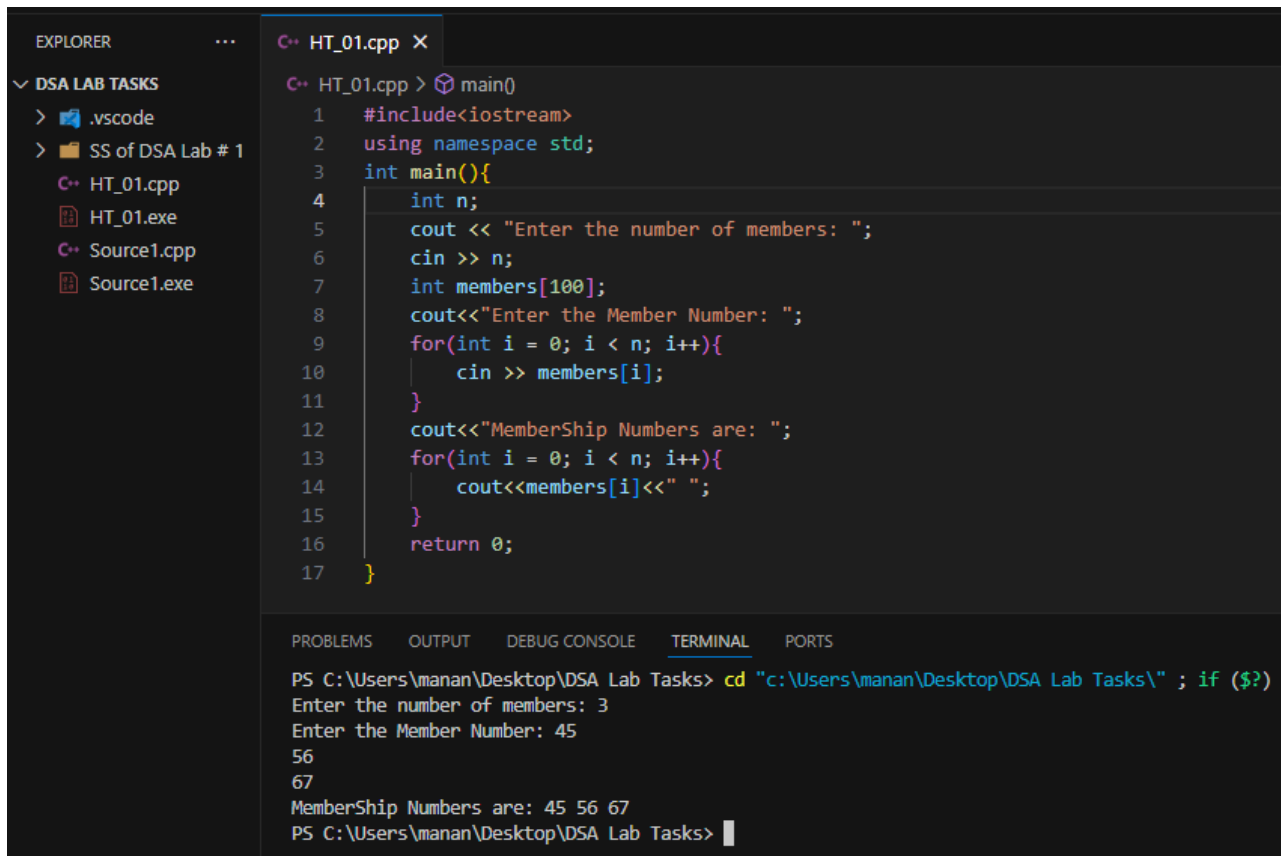
- Takes **n** numbers into an array.
- Asks for an index **k** to delete.
- Shifts all elements after **k** one step left.
- Reduces size by **1**.
- Prints the updated array.

HOME TASKS

PART A – EXTRA BASIC ARRAY PRACTICE (QUICK WARM-UP)

1. Read & Show (Members): Read N membership numbers into an array and print them on one line.

- **Program:**



```
EXPLORER    ...    C++ HT_01.cpp X
v DSA LAB TASKS
> .vscode
> SS of DSA Lab # 1
  C++ HT_01.cpp
  HT_01.exe
  C++ Source1.cpp
  Source1.exe

C++ HT_01.cpp > main()
1  #include<iostream>
2  using namespace std;
3  int main(){
4      int n;
5      cout << "Enter the number of members: ";
6      cin >> n;
7      int members[100];
8      cout<<"Enter the Member Number: ";
9      for(int i = 0; i < n; i++){
10         cin >> members[i];
11     }
12     cout<<"MemberShip Numbers are: ";
13     for(int i = 0; i < n; i++){
14         cout<<members[i]<<" ";
15     }
16     return 0;
17 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\manan\Desktop\DSA Lab Tasks> cd "c:\Users\manan\Desktop\DSA Lab Tasks\" ; if ($?)
Enter the number of members: 3
Enter the Member Number: 45
56
67
MemberShip Numbers are: 45 56 67
PS C:\Users\manan\Desktop\DSA Lab Tasks> |
```

- **Code Explanation:**

- **cin >> n;** → takes size of members list.
- Loop stores **n** numbers in **members[]**.
- Another loop prints all members.

2. Make a Copy (Members): Copy the membership array into another array and print the copy to confirm.

- **Program:**

```
C++ HT_02.cpp X
C++ HT_02.cpp > ...
1  #include <iostream>
2  using namespace std;
3  int main() {
4      int n;
5      cout << "Enter number of members: ";
6      cin >> n;
7      int members[100], copy[100];
8      cout << "Enter membership numbers: ";
9      for (int i = 0; i < n; i++) {
10         cin >> members[i];
11     }
12     for (int i = 0; i < n; i++) {
13         copy[i] = members[i];
14     }
15     cout << "Copied array: ";
16     for (int i = 0; i < n; i++) {
17         cout << copy[i] << " ";
18     }
19     return 0;
20 }

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
PS C:\Users\manan\Desktop\DSA Lab Tasks> cd "c:\Users\manan\Desktop\DSA Lab Tasks\" ; if ($?) { g++ HT_02.cpp -o HT_02 }
Enter number of members: 3
Enter membership numbers: 34
45
76
Copied array: 34 45 76
PS C:\Users\manan\Desktop\DSA Lab Tasks> 
```

- **Code Explanation:**

- Input size **n** and fill **members[]**.
- Loop copies each value into **copy[]**.
- Print the **copy[]** array.

3. Sum & Count (Visitors): Read M hourly visitor counts (non-negative) and print the total visitors and the count of hours recorded.

- **Program:**

```
C++ HT_03.cpp X
C++ HT_03.cpp > main()
1  #include <iostream>
2  using namespace std;
3  int main() {
4      int m;
5      cout << "Enter number of hours: ";
6      cin >> m;
7      int visitors[100];
8      cout << "Enter visitors for each hour: ";
9      for (int i = 0; i < m; i++) {
10         cin >> visitors[i];
11     }
12     int sum = 0;
13     for (int i = 0; i < m; i++) {
```



```

14     sum += visitors[i];    // add all visitors
15 }
16 cout << "Total visitors = " << sum << endl;
17 cout << "Count of hours = " << m << endl;
18 return 0;
19 }
20

```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```

PS C:\Users\manan\Desktop\DSA Lab Tasks> cd "c:\Users\manan\Desktop\DSA Lab Tasks\" ; if ($?) { g++ HT_03.cpp -o HT_03 }
Enter number of hours: 4
Enter visitors for each hour: 6
9
12
24
Total visitors = 51
Count of hours = 4
PS C:\Users\manan\Desktop\DSA Lab Tasks>

```

• Code Explanation:

- Input **n** (hours) and **visitors[]**.
- Loop adds all visitors to **sum**.
- Print total visitors and hours count.

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4. First & Last Match (Members): Ask for a membership number. Print the first index where it appears and the last index where it appears (or -1 if not found).

• Program:

```

C++ HT_04.cpp X
C++ HT_04.cpp > main()
1 #include <iostream>
2 using namespace std;
3 int main() {
4     int n;
5     cout << "Enter number of members: ";
6     cin >> n;
7     int members[100];
8     cout << "Enter membership numbers: ";
9     for (int i = 0; i < n; i++) {
10         cin >> members[i];
11     }
12     int target;
13     cout << "Enter number to search: ";
14     cin >> target;
15     int first = -1, last = -1;
16     for (int i = 0; i < n; i++) {
17         if (members[i] == target) {
18             if (first == -1) {
19                 first = i;    // set first time
20             }
21             last = i;        // update every time found
22         }
23     }
24     cout << "First index = " << first << endl;
25     cout << "Last index = " << last << endl;
26     return 0;
27 }

```

```

PS C:\Users\manan\Desktop\DSA Lab Tasks> cd "c:\Users\manan\Desktop\DSA Lab Tasks\" ; if ($?) { g++ HT_04.cpp -o HT_04 }
Enter number of members: 4
Enter membership numbers: 23
34
56
67
Enter number to search: 56
First index = 2
Last index = 2
PS C:\Users\manan\Desktop\DSA Lab Tasks>

```

• Code Explanation:

- Input **n**, array, and target.
- Loop finds first index (**if target == arr[i]**).
- Another loop finds last index.
- Print results (or **-1** if not found).



5. Even/Odd Count (Members): Print how many membership numbers are even and how many are odd.

• **Program:**

```
C++ HT_05.cpp X
C++ HT_05.cpp > ...
1 #include <iostream>
2 using namespace std;
3 int main() {
4     int n;
5     cout << "Enter number of members: ";
6     cin >> n;
7     int members[100];
8     cout << "Enter membership numbers: ";
9     for (int i = 0; i < n; i++) {
10         cin >> members[i];
11     }
12     int evenCount = 0, oddCount = 0;
13     for (int i = 0; i < n; i++) {
14         if (members[i] % 2 == 0) {
15             evenCount++;
16         } else {
17             oddCount++;
18         }
19     }
20     cout << "Even count = " << evenCount << endl;
21     cout << "Odd count = " << oddCount << endl;
22     return 0;
23 }
24
```

```
PS C:\Users\manan\Desktop\DSA Lab Tasks> cd "c:\Users\manan\Desktop\DSA Lab Tasks\" ; if ($?) { g++ HT_05.cpp -o HT_05 } ; if ($?) { .\HT_05 }
Enter number of members: 2
Enter membership numbers: 45
67
Even count = 0
Odd count = 2
PS C:\Users\manan\Desktop\DSA Lab Tasks>
```

• **Code Explanation:**

- Input size **n** and **members[]**.
- Loop checks each number with **%2**.
- Count evens and odds separately.
- Print both counts.

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6. Is Sorted? (Members): Check if the membership list is in non-decreasing order; print Sorted or Not Sorted.

• **Program:**

```
C++ HT_06.cpp X
C++ HT_06.cpp > main()
1 #include <iostream>
2 using namespace std;
3 int main()
4 {
5     int n;
6     cout << "Enter number of members: ";
7     cin >> n;
8     int members[100];
9     cout << "Enter membership numbers: ";
10    for (int i = 0; i < n; i++)
11    {
12        cin >> members[i];
13    }
14    bool sorted = true; // assume sorted
15    for (int i = 0; i < n - 1; i++)
16    {
17        if (members[i] > members[i + 1])
18        {
19            sorted = false;
20            break;
21        }
22    }
23    if (sorted)
24        cout << "Sorted" << endl;
25    else
26        cout << "Not Sorted" << endl;
27    return 0;
28 }
29
```

```
PS C:\Users\manan\Desktop\DSA Lab Tasks> cd "c:\Users\manan\Desktop\DSA Lab Tasks\" ; if ($?) { g++ HT_06.cpp -o HT_06 } ; if ($?) { .\HT_06 }
Enter number of members: 4
Enter membership numbers: 23
87
56
43
Not Sorted
PS C:\Users\manan\Desktop\DSA Lab Tasks>
```

• Code Explanation:

- Input **n** and **members[]**.
- Loop checks if **arr[i] > arr[i+1]**.
- If yes → set sorted = **false**.
- Print "**Sorted**" or "**Not Sorted**"

PART B – LIBRARY FEATURES (CORE SCENARIO TASKS)

1. Reverse Order (Membership Numbers): Print the membership numbers from last to first so the librarian can call students in reverse. (Do not permanently change the original list.)

• Program:

```
C++ HT_01.cpp X
Home Task > C++ HT_01.cpp > main()
1 #include <iostream>
2 using namespace std;
3 int main() {
4     int n;
5     cout << "Enter number of members: ";
6     cin >> n;
7     int members[100];
8     cout << "Enter membership numbers: ";
9     for (int i = 0; i < n; i++) cin >> members[i];
10    cout << "Reverse order: ";
11    for (int i = n - 1; i >= 0; i--) cout << members[i] << " ";
12    cout << endl;
13 }
14
```

```
PS C:\Users\manan\Desktop\DSA Lab Tasks> cd "c:\Users\manan\Desktop\DSA Lab Tasks\Home Task" ; if ($?) { g++ HT_01.cpp -o HT_01 } ; if ($?) { .\HT_01 }
Enter number of members: 2
Enter membership numbers: 34
43
Reverse order: 43 34
PS C:\Users\manan\Desktop\DSA Lab Tasks\Home Task>
```

• Code Explanation:

- **for (int i = n - 1; i >= 0; i--) cout << members[i] << " ";**
- Reads membership numbers into an array.
- Prints them starting from the last index down to 0.
- Does not modify the original array.

2. Quick Stats in One Pass (Hourly Visitor Count): From the visitor list, compute and print Min, Max, and Average. Do it in one loop by keeping a running min, max, and sum.

• Program:

```
C++ HT_02.cpp X
Home Task > C++ HT_02.cpp > ...
1 #include <iostream>
2 using namespace std;
3 int main() {
4     int n;
5     cout << "Enter hours: ";
6     cin >> n;
7     int visitors[100];
8     cout << "Enter visitors per hour: ";
9     for (int i = 0; i < n; i++) cin >> visitors[i];
10    int mn = visitors[0], mx = visitors[0], sum = 0;
11    for (int i = 0; i < n; i++) {
12        if (visitors[i] < mn) mn = visitors[i];
13        if (visitors[i] > mx) mx = visitors[i];
14        sum += visitors[i];
15    }
16    cout << "Min: " << mn << ", Max: " << mx
17        << ", Avg: " << (sum / (double)n) << endl;
18 }
19
```

```
PS C:\Users\manan\Desktop\DSA Lab Tasks> cd "c:\Users\manan\Desktop\DSA Lab Tasks\Home Task" ; if ($?) { g++ HT_02.cpp -o HT_02 } ; if ($?) { .\HT_02 }
Enter hours: 4
Enter visitors per hour: 23
89
67
45
Min: 23, Max: 89, Avg: 56
PS C:\Users\manan\Desktop\DSA Lab Tasks\Home Task>
```

• Code Explanation:

- `if (visitors[i] < mn) mn = visitors[i];`
- `if (visitors[i] > mx) mx = visitors[i];`
- `sum += visitors[i];`
- Loops once through the visitor list.
- Tracks minimum, maximum, and running sum together.
- Computes average using total `sum ÷ n`.

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3. Linear Search with Comparison Count (Membership Numbers): Ask for a target membership number and search linearly. Show whether it's found, the index, and how many comparisons were made during the search.

• Program:



The screenshot shows a C++ program in a code editor. The program prompts the user to enter the number of members, then membership numbers, and finally a target number to search for. It then outputs the index where the target was found and the total number of comparisons made.

```
1 #include <iostream>
2 using namespace std;
3 int main() {
4     int n;
5     cout << "Enter number of members: ";
6     cin >> n;
7     int members[100];
8     cout << "Enter membership numbers: ";
9     for (int i = 0; i < n; i++) cin >> members[i];
10    int target, comparisons = 0;
11    cout << "Enter number to search: ";
12    cin >> target;
13    int index = -1;
14    for (int i = 0; i < n; i++) {
15        comparisons++;
16        if (members[i] == target) {
17            index = i;
18            break;
19        }
20    }
21    if (index != -1)
22        cout << "Found at index " << index;
23    else
24        cout << "Not found";
25    cout << " | Comparisons: " << comparisons << endl;
26 }
```

Terminal output:

```
PS C:\Users\manan\Desktop\DSA Lab Tasks> cd "c:\Users\manan\Desktop\DSA Lab Tasks\Home Task" & if ($?) { g++ HT_03.cpp -o HT_03 } & if ($?) { .\HT_03 }
Enter number of members: 3
Enter membership numbers: 23
34
45
Enter number to search: 45
Found at index 2 | Comparisons: 3
PS C:\Users\manan\Desktop\DSA Lab Tasks\Home Task>
```

• Code Explanation:

- `for (int i = 0; i < n; i++) {`
- `comparisons++;`
- `if (members[i] == target) { index = i; break; }}`
- Compares each element with the target.
- Stops immediately when found.
- Reports index and number of comparisons.

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4. Insert at a Given Position (Membership Numbers): A new member must appear at a particular position in the list. Insert the number at that position by shifting elements to the right, then show the updated list.

• Program:

```

1 #include <iostream>
2 using namespace std;
3 int main() {
4     int n;
5     cout << "Enter number of members: ";
6     cin >> n;
7     int members[100];
8     cout << "Enter membership numbers: ";
9     for (int i = 0; i < n; i++) cin >> members[i];
10    int pos, newMem;
11    cout << "Enter position and new member: ";
12    cin >> pos >> newMem;
13    if (pos < 0 || pos > n) {
14        cout << "Invalid position.\n";
15        return 0;
16    }
17    for (int i = n; i > pos; i--) {
18        members[i] = members[i - 1];
19    }
20    members[pos] = newMem;
21    n++;
22    cout << "After insert: ";
23    for (int i = 0; i < n; i++) cout << members[i] << " ";
24    cout << endl;
25 }

```

```

PS C:\Users\manan\Desktop\DSA Lab Tasks> cd "C:\Users\manan\Desktop\DSA Lab Tasks\Home Task" & if ($?) { g++ HT_04.cpp -o HT_04 }; if ($?) { .\HT_04 }
Enter number of members: 3
Enter membership numbers: 12
32
65
Enter position and new member: 2
32
After insert: 12 32 32 65
PS C:\Users\manan\Desktop\DSA Lab Tasks\Home Task>

```

• Code Explanation:

- **for (int i = n; i > pos; i--) members[i] = members[i - 1];**
- **members[pos] = newMem; n++;**
- Shifts all elements from position to the right.
- Places the new value at the desired position.
- Increases array size by 1.

5. Delete at a Given Index (Membership Numbers): A wrong entry needs to be removed from a specific index. Delete it by shifting elements to the left, then show the updated list.

• Program:

```

1 #include <iostream>
2 using namespace std;
3 int main() {
4     int n;
5     cout << "Enter number of members: ";
6     cin >> n;
7     int members[100];
8     cout << "Enter membership numbers: ";
9     for (int i = 0; i < n; i++) cin >> members[i];
10    int idx;
11    cout << "Enter index to delete: ";
12    cin >> idx;
13    if (idx < 0 || idx >= n) {
14        cout << "Invalid index.\n";
15        return 0;
16    }
17    for (int i = idx; i < n - 1; i++) {
18        members[i] = members[i + 1];
19    }
20    n--;
21    cout << "After delete: ";
22    for (int i = 0; i < n; i++) cout << members[i] << " ";
23    cout << endl;
24 }

```

```

PS C:\Users\manan\Desktop\DSA Lab Tasks> cd "C:\Users\manan\Desktop\DSA Lab Tasks\Home Task" & if ($?) { g++ HT_05.cpp -o HT_05 }; if ($?) { .\HT_05 }
Enter number of members: 3
Enter membership numbers: 12
23
34
Enter index to delete: 1
After delete: 12 34
PS C:\Users\manan\Desktop\DSA Lab Tasks\Home Task>

```

• Code Explanation:

- **for (int i = idx; i < n - 1; i++) members[i] = members[i + 1];**
- **n--;**
- Shifts elements left from the delete index.
- Overwrites the deleted value.
- Reduces array size by 1.