Day : Arrays (6-8-2025)

Input: Read the number of elements and the elements themselves.

Process: Store the elements in an array.

Output: Display the elements of the array.

Code:

```
#include <stdio.h>

int main() {
    int n;
    scanf("%d", &n);
    int arr[n];
    for (int i = 0; i < n; i++)
        scanf("%d", &arr[i]);
    for (int i = 0; i < n; i++)
        printf("%d ", arr[i]);
    return 0;
}
```

2.Find the Sum of Elements of an Array

IPO Breakdown:

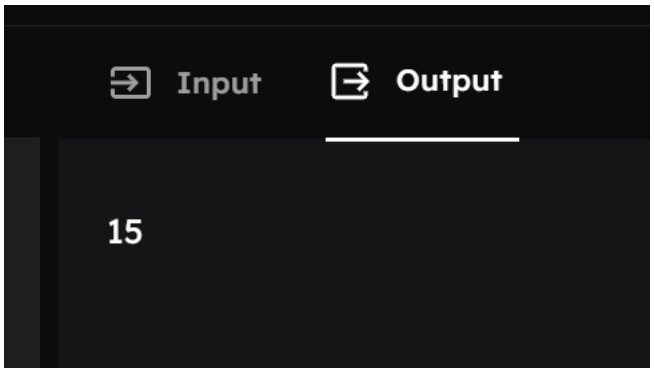
Input: Array of integers.

Process: Sum all elements of the array.

Output: Display the sum.

```
#include <stdio.h>

int main() {
    int n, sum = 0;
    scanf("%d", &n);
    int arr[n];
    for (int i = 0; i < n; i++)
        scanf("%d", &arr[i]);
    for (int i = 0; i < n; i++)
        sum += arr[i];
    printf("%d", sum);
    return 0;
}
```



3. Find the Maximum and Minimum Element in an Array

Input: Array of integers.

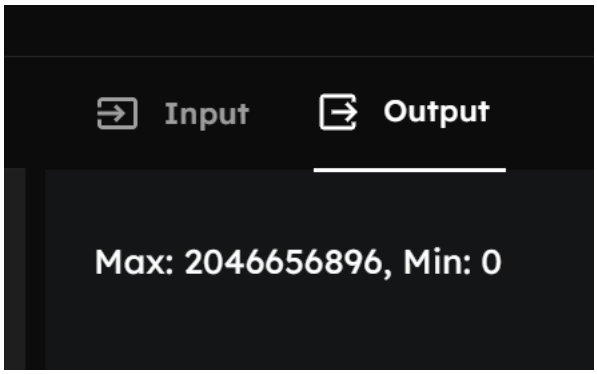
Process: Iterate through the array to find the maximum and minimum values.

Output: Display the maximum and minimum values.

Code:

```
#include <stdio.h>

int main() {
    int n, max, min;
    scanf("%d", &n);
    int arr[n];
    for (int i = 0; i < n; i++)
        scanf("%d", &arr[i]);
    max = min = arr[0];
    for (int i = 1; i < n; i++) {
        if (arr[i] > max) max = arr[i];
        if (arr[i] < min) min = arr[i];
    }
    printf("Max: %d, Min: %d", max, min);
    return 0;
}
```



4. Reverse an Array

Input: Array of integers where n=5

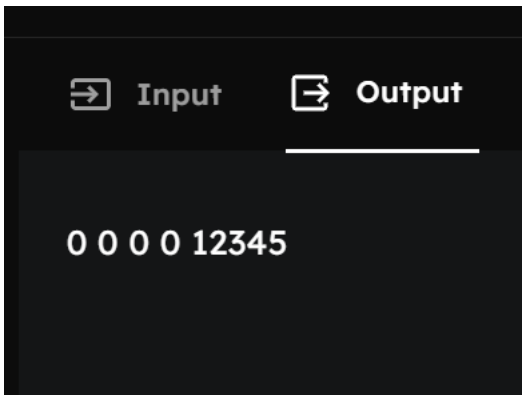
Process: Swap elements from the start and end moving towards the center.

Output: Display the reversed array.

Code:

```
#include <stdio.h>

int main() {
    int n;
    scanf("%d", &n);
    int arr[n];
    for (int i = 0; i < n; i++)
        scanf("%d", &arr[i]);
    for (int i = 0; i < n / 2; i++) {
        int temp = arr[i];
        arr[i] = arr[n - i - 1];
        arr[n - i - 1] = temp;
    }
    for (int i = 0; i < n; i++)
        printf("%d ", arr[i]);
    return 0;
}
```



6. Sort an Array in Ascending Order

Input: Array of integers.

Process: Sort the array using a sorting algorithm (e.g., Bubble Sort).

Output: Display the sorted array.

```c
#include <stdio.h>

int main() {
    int n;
    scanf("%d", &n);
    int arr[n];
    for (int i = 0; i < n; i++)
        scanf("%d", &arr[i]);
    for (int i = 0; i < n - 1; i++)
        for (int j = 0; j < n - i - 1; j++)
            if (arr[j] > arr[j + 1]) {
                int temp = arr[j];
                arr[j] = arr[j + 1];
                arr[j + 1] = temp;
            }
    for (int i = 0; i < n; i++)
        printf("%d ", arr[i]);
    return 0;
}
```