**A. Analysis Operations**

1. **Sum of Elements** – Write a program to find the sum of all elements in {10, 20, 30, 40, 50}.
2. **Average of Elements** – Calculate and print the average of {5, 15, 25, 35, 45}.
3. **Maximum Value** – Find the largest number in {2, 8, 6, 4, 10, 12}.
4. **Minimum Value** – Find the smallest number in {100, 50, 75, 25, 150}.
5. **Sum of Even Numbers** – Find the sum of even numbers in {3, 6, 9, 12, 15}.

**B. Search Operations**

1. **Linear Search** – Search for the number 25 in {5, 10, 15, 20, 25, 30} and print whether it is found or not.
2. **Find Index** – Print the index of 70 in {10, 20, 30, 40, 50, 60, 70}.
3. **Count Occurrences** – Count how many times the number 5 appears in {5, 2, 5, 3, 5, 4, 5}.
4. **First and Last Occurrence** – Find the first and last index of the number 10 in {10, 20, 10, 30, 40, 10, 50}.

**C. Modification Operations**

1. **Increase All by 10** – Add 10 to every element in {1, 2, 3, 4, 5}.
2. **Multiply All by 3** – Multiply every element in {2, 4, 6, 8} by 3.
3. **Reverse Array** – Reverse {10, 20, 30, 40, 50} and print it.
4. **Left Shift by 1** – Left shift {1, 2, 3, 4, 5} by one position.
5. **Right Shift by 1** – Right shift {10, 20, 30, 40, 50} by one position.

**D. Special Problems**

1. **Second Largest Element** – Find the second largest number in {5, 10, 20, 15, 30}.
2. **Second Smallest Element** – Find the second smallest number in {7, 3, 9, 1, 5}.
3. **Remove Duplicates (Basic)** – Remove duplicates from {1, 2, 2, 3, 4, 4, 5} and print result.
4. **Copy Array** – Copy all elements from {11, 22, 33, 44, 55} to another array and print it.
5. **Swap First and Last** – Swap the first and last elements in {1, 2, 3, 4, 5}.
6. **Rotate Array k Times** – Rotate {1, 2, 3, 4, 5} to the right by 2 positions.