1. Write a program to find the maximum and minimum elements in an array.

   Example:
   Input:
   4
   10 12 23 15

   Output:
   Maximum element = 23
   Minimum element = 10

Template

```
#include <stdio.h>
/* Include any headers here */

int main()
{

   /* Put your declarations here */

   int n, i;
   int max, min;

 scanf("%d", &n);

  int arr[n];


   /*  --- Start your solution here --- */


   /*  --- End of the solution --- */
   return 0;
}
```

Input	Output
6 34 67 89 45 12 66	Maximum element = 89 Minimum element = 12

8 **6 0 -1 5 3 7 9 1**	**Maximum element = 9** **Minimum element = -1**
10 **90 43 67 -10 88 23 6 0 12 65**	**Maximum element = 90** **Minimum element = -10**

2. Implement a program to search for a specific element in an array. If found, print the element found at index; otherwise, print a message indicating that the element is not present.

   Example 1:
   Input:
   5 //size
   10 20 30 40 50 //array elements
   30 //search element

   Output:
   Element 30 found at index 2

   Example 2:
   Input:
   4
   15 25 35 45
   50

   Output:
   Element 50 is not present in the array.

Template

```
#include <stdio.h>
/* Include any headers here */

int main()
{

   /* Put your declarations here */
 int n, i, searchElement, found = 0;

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

   scanf("%d", &n);

    int arr[n];


/*  --- Start your solution here --- */
    /*  --- End of the solution --- */
     return 0;
  }
```

Input	Output
6 34 23 12 45 89 76 90	Element 90 is not present in the array.
4 23 67 45 33 67	Element 67 found at index 1
4 -1 5 7 3 -1	Element -1 found at index 0

3. Write a program to copy all elements of one array into another array.

Example:
Input:
4
10 12 23 15
Output:
10 12 23 15

Template

```
#include <stdio.h>
/* Include any headers here */

int main()
{

   /* Put your declarations here */
 int n, i;

   // Input the number of elements in the array
  // printf("Enter the number of elements in the array: ");
   scanf("%d", &n);

   int arr1[n], arr2[n];

/*  --- Start your solution here --- */
    /*  --- End of the solution --- */
   return 0;
}
```

Input:	**Output:**
4 10 12 23 15	10 12 23 15

5 -1 5 6 2 3	-1 5 6 2 3
6 43 54 87 9 76 56	43 54 87 9 76 56

4. Write a program to count the number of even and odd elements in an integer array.

Example:
Input:
5
10 20 12 15 23

Output:
Number of even elements: 3
Number of odd elements: 2

5
6
3
4
8
5
Number of even elements: 3
Number of odd elements: 2

Template

```
#include <stdio.h>
/* Include any headers here */

int main()
{

   /* Put your declarations here */
int n, i, evenCount = 0, oddCount = 0;

   // Input the number of elements in the array
  // printf("Enter the number of elements in the array: ");
   scanf("%d", &n);

   int arr[n];  // Declare an array of size n


/*  --- Start your solution here --- */
    /*  --- End of the solution --- */
     return 0;
}
```

Input:	**Output:**
4 10 12 23 15	Number of even elements: 2 Number of odd elements: 2
5 -1 5 6 2 3	Number of even elements: 2 Number of odd elements: 3
6 43 54 87 9 76 56	Number of even elements: 3 Number of odd elements: 3

5. Create a program to find the frequency of a specific element in an array.

Size of the array: int
Array elements: int[n]
Example:

Template

```
#include <stdio.h>
/* Include any headers here */

int main()
{

   /* Put your declarations here */
 int n, i, searchElement, frequency = 0;

   // Input the number of elements in the array
  // printf("Enter the number of elements in the array: ");
   scanf("%d", &n);

   int arr[n];  // Declare an array of size n




/*  --- Start your solution here --- */
    /*  --- End of the solution --- */
     return 0;
  }
```

Input:	**Output:**
4 10 12 23 15	Array Elements: 10 12 23 15 Frequency of element 15:1
5 10 10 10 5 10	Array Elements: 10 10 10 5 10 Frequency of element 10:4

6 -2 -2 5 6 -9 67	Array Elements: -2 -2 5 6 -9 67 Frequency of element 15:0

6. Write a C program that removes duplicate elements from an array.

```
#include <stdio.h>
/* Include any headers here */

int main()
{

   /* Put your declarations here */
 int n, i, searchElement, frequency = 0;

   // Input the number of elements in the array
  // printf("Enter the number of elements in the array: ");
   scanf("%d", &n);

   int arr[n];  // Declare an array of size n



/*  --- Start your solution here --- */
    /*  --- End of the solution --- */
     return 0;
}
```

Input:	**Output:**
5	Original array:

10 12 13 10 12	10 12 13 10 12 Array after removing duplicates: 10 12 13
5 10 10 10 5 10	Original array: 10 10 10 5 10 Array after removing duplicates: 10 5
6 -2 -2 5 6 -9 67	Original array: -2 -2 5 6 -9 67 Array after removing duplicates: -2 5 6 -9 67

7. Implement a C program to insert an element at a specific position in an array.
8. Write a C program to merge two sorted arrays into a single sorted array.