

## C Program to get and print the array elements

<pre>1 #include &lt;stdio.h&gt; 2 3 #define MAX_SIZE 100 4 5 int main() { 6     int arr[MAX_SIZE]; 7     int size, i; 8 9     printf("Enter the number of elements (up to %d): ", MAX_SIZE); 10    scanf("%d", &amp;size); 11 12    printf("Enter the elements:\n"); 13    for (i = 0; i &lt; size; i++) { 14        printf("Element %d: ", i + 1); 15        scanf("%d", &amp;arr[i]); 16    } 17 18    printf("\nElements in the array are: "); 19    for (i = 0; i &lt; size; i++) { 20        printf("%d ", arr[i]); 21    } 22 23    return 0; 24 } 25</pre>	<pre>/tmp/MbJakyZb4j.o Enter the number of elements (up to 100): 3 Enter the elements: Element 1: 2 Element 2: 3 Element 3: 6 Elements in the array are: 2 3 6</pre>
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## C Program to find the sum and average of array Elements

<pre>main.c 1 #include &lt;stdio.h&gt; 2 3 #define MAX_SIZE 100 4 5 int main() { 6     int arr[MAX_SIZE]; 7     int size, i; 8     int sum = 0; 9     float average; 10 11    printf("Enter the number of elements (up to %d): ", MAX_SIZE); 12    scanf("%d", &amp;size); 13 14    printf("Enter the elements:\n"); 15    for (i = 0; i &lt; size; i++) { 16        printf("Element %d: ", i + 1); 17        scanf("%d", &amp;arr[i]); 18        sum += arr[i]; // Add the current element to the sum 19    } 20 21    average = (float)sum / size; // Calculate the average 22 23    printf("\nSum of the elements: %d\n", sum); 24    printf("Average of the elements: %.2f\n", average); 25 26    return 0; 27 } 28</pre>	<pre>/tmp/MbJakyZb4j.o Enter the number of elements (up to 100): 5 Enter the elements: Element 1: 8 Element 2: 9 Element 3: 4 Element 4: 3 Element 5: 8 Sum of the elements: 32 Average of the elements: 6.40</pre>
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## C Program to find Smallest element in the array

main.c	Output
<pre>1 #include &lt;stdio.h&gt; 2 3 #define MAX_SIZE 100 4 5 int main() { 6     int arr[MAX_SIZE]; 7     int size, i; 8     int smallest; 9 10    printf("Enter the number of elements (up to %d): ", MAX_SIZE); 11    scanf("%d", &amp;size); 12 13    printf("Enter the elements:\n"); 14    for (i = 0; i &lt; size; i++) { 15        printf("Element %d: ", i + 1); 16        scanf("%d", &amp;arr[i]); 17    } 18 19    smallest = arr[0]; // Assume the first element is the smallest 20 21    for (i = 1; i &lt; size; i++) { 22        if (arr[i] &lt; smallest) { 23            smallest = arr[i]; // Update the smallest element 24        } 25    } 26 27    printf("\nThe smallest element is: %d\n", smallest); 28 29    return 0; 30 }</pre>	<pre>/tmp/MbJkYzb4j.o Enter the number of elements (up to 100): 3 Enter the elements: Element 1: 5 Element 2: 1 Element 3: 80 The smallest element is: 1  </pre>

## C Program to find Second Largest element in the array

main.c	Output
<pre>1 #include &lt;stdio.h&gt; 2 3 #define MAX_SIZE 100 4 5 void bubbleSort(int arr[], int size) { 6     int i, j, temp; 7 8     for (i = 0; i &lt; size - 1; i++) { 9         for (j = 0; j &lt; size - i - 1; j++) { 10            if (arr[j] &lt; arr[j + 1]) { 11                // Swap the elements 12                temp = arr[j]; 13                arr[j] = arr[j + 1]; 14                arr[j + 1] = temp; 15            } 16        } 17    } 18 } 19 20 int main() { 21     int arr[MAX_SIZE]; 22     int size, i; 23 24     printf("Enter the number of elements (up to %d): ", MAX_SIZE); 25     scanf("%d", &amp;size); 26 27     printf("Enter the elements:\n"); 28     for (i = 0; i &lt; size; i++) { 29         printf("Element %d: ", i + 1); 30         scanf("%d", &amp;arr[i]); 31     } 32 33     bubbleSort(arr, size); 34 35     printf("\nThe second largest element is: %d\n", arr[1]); 36 37     return 0; 38 } 39</pre>	<pre>/tmp/KbCbF57xdY.o Enter the number of elements (up to 100): 5 Enter the elements: Element 1: 1 Element 2: 2 Element 3: 3 Element 4: 4 Element 5: 5 The second largest element is: 4  </pre>

## C Program to find the sum of array elements

main.c	Run	Output
<pre>1 #include &lt;stdio.h&gt; 2 3 #define MAX_SIZE 100 4 5 int main() { 6     int arr[MAX_SIZE]; 7     int size, i; 8     int sum = 0; 9 10    printf("Enter the number of elements (up to %d): ", MAX_SIZE); 11    scanf("%d", &amp;size); 12 13    printf("Enter the elements:\n"); 14    for (i = 0; i &lt; size; i++) { 15        printf("Element %d: ", i + 1); 16        scanf("%d", &amp;arr[i]); 17        sum += arr[i]; 18    } 19 20    printf("The sum of array elements is: %d\n", sum); 21 22    return 0; 23 } 24</pre>		<pre>/tmp/KbCbFS7xdY.o Enter the number of elements (up to 100): 5 Enter the elements: Element 1: 1 Element 2: 2 Element 3: 3 Element 4: 4 Element 5: 5 The second largest element is: 4</pre>

## C Program to Search an Element in an array

main.c	Run	Output
<pre>1 #include &lt;stdio.h&gt; 2 3 #define MAX_SIZE 100 4 5 int searchElement(int arr[], int size, int element) { 6     int i; 7     for (i = 0; i &lt; size; i++) { 8         if (arr[i] == element) { 9             return i; // Return the index where the element is found 10        } 11    } 12 13    return -1; // Return -1 if the element is not found 14 } 15 16 int main() { 17     int arr[MAX_SIZE]; 18     int size, i, element; 19 20    printf("Enter the number of elements (up to %d): ", MAX_SIZE); 21    scanf("%d", &amp;size); 22 23    printf("Enter the elements:\n"); 24    for (i = 0; i &lt; size; i++) { 25        printf("Element %d: ", i + 1); 26        scanf("%d", &amp;arr[i]); 27    } 28    printf("Enter the element to search: "); 29    scanf("%d", &amp;element); 30 31    int index = searchElement(arr, size, element); 32 33    if (index != -1) { 34        printf("Element %d found at index %d.\n", element, index); 35    } else { 36        printf("Element %d not found in the array.\n", element); 37    } 38    return 0; 39 } 40</pre>		<pre>/tmp/KbCbFS7xdY.o Enter the number of elements (up to 100): 5 Enter the elements: Element 1: 12 Element 2: 35 Element 3: 65 Element 4: 15 Element 5: 54 Enter the element to search: 15 Element 15 found at index 3.</pre>

## C Program to find Largest element in the array

main.c	Output
<pre>1 #include &lt;stdio.h&gt; 2 3 #define MAX_SIZE 100 4 5 int findLargestElement(int arr[], int size) { 6     int i; 7     int largest = arr[0]; 8 9     for (i = 1; i &lt; size; i++) { 10        if (arr[i] &gt; largest) { 11            largest = arr[i]; 12        } 13    } 14 15    return largest; 16 } 17 18 int main() { 19     int arr[MAX_SIZE]; 20     int size, i; 21 22     printf("Enter the number of elements (up to %d): ", MAX_SIZE); 23     scanf("%d", &amp;size); 24 25     printf("Enter the elements:\n"); 26     for (i = 0; i &lt; size; i++) { 27         printf("Element %d: ", i + 1); 28         scanf("%d", &amp;arr[i]); 29     } 30 31     int largest = findLargestElement(arr, size); 32 33     printf("The largest element in the array is: %d\n", largest); 34 35     return 0; 36 } 37</pre>	<pre>/tmp/KbCbF57xdY.o Enter the number of elements (up to 100): 5 Enter the elements: Element 1: 45 Element 2: 85 Element 3: 95 Element 4: 14 Element 5: 40 The largest element in the array is: 95</pre>

## C Program to print all the numbers which are less than given key element from a given array.

main.c	Output
<pre>1 #include &lt;stdio.h&gt; 2 3 #define MAX_SIZE 100 4 5 void printNumbersLessThanKey(int arr[], int size, int key) { 6     int i; 7 8     printf("Numbers less than %d: ", key); 9     for (i = 0; i &lt; size; i++) { 10        if (arr[i] &lt; key) { 11            printf("%d ", arr[i]); 12        } 13    } 14    printf("\n"); 15 } 16 17 int main() { 18     int arr[MAX_SIZE]; 19     int size, i, key; 20 21     printf("Enter the number of elements (up to %d): ", MAX_SIZE); 22     scanf("%d", &amp;size); 23 24     printf("Enter the elements:\n"); 25     for (i = 0; i &lt; size; i++) { 26         printf("Element %d: ", i + 1); 27         scanf("%d", &amp;arr[i]); 28     } 29 30     printf("Enter the key element: "); 31     scanf("%d", &amp;key); 32 33     printNumbersLessThanKey(arr, size, key); 34 35     return 0; 36 } 37</pre>	<pre>/tmp/KbCbF57xdY.o Enter the number of elements (up to 100): 5 Enter the elements: Element 1: 10 Element 2: 20 Element 3: 30 Element 4: 40 Element 5: 50 Enter the key element: 30 Numbers less than 30: 10 20</pre>