

1D Array Practice Questions

For all the programs array size and type can be assumed to be 10 and int by default. Use #define macro for size.

1. Write a program that calculates the sum of squares of the elements of an integer array of size 10.
2. Display array elements in reverse. ie from last to first.
3. Write a program to search for an element accepted from user in an array of floating-point values of size 50. Display the index if element is found else display message Not Found.
4. Display elements of array in triangle pattern. Use formatting to get a uniform display.

Eg:

A = {60,700,80,900,10}

Output:

```
60
60 700
60 700 80
60 700 80 900
60 700 80 900 10
```

5. You know size of integer array. Can you find number of elements in it? How?
6. Write C program to shift all elements of an array by n locations to right or left in circular fashion. Take all inputs from user.
7. Delete all duplicate elements from an array retaining the first occurrence. Note: Array elements cannot be deleted. shift and replace can be done.
8.

```
#include<stdio.h>
#include<stdlib.h>
```

```
int main() {

    int c, n;

    printf("Ten random numbers in [1,100]\n");

    for (c = 1; c <= 10; c++) {
        n = rand() % 100 + 1;
        printf("%d\n", n);
    }

    return 0;
}
```

Study the above code. Read more about rand() function.

Initialize array of integers with values ranging 50 – 100 both inclusive and display the contents.

9. Take 20 integer inputs from user and print the following:

number of positive numbers
number of negative numbers
number of odd numbers
number of even numbers
number of 0.

10. Write a program to check if elements of an array are same or not it read from front or back. E.g.-

2 3 15 15 3 2

11. Reverse elements of array without using additional array.

Eg

input array – {10,45,32,16,88}

should change to {88,16,32,45,10}

12. C program to find nearest lesser and greater element in an array.
13. You have 2 arrays of size 5 each having elements in sorted order. Create a new array of 10 having elements of the both the arrays in sorted order.

Eg:

int A = { 45, 50, 70, 85, 90};

int B = { 30, 40, 60, 75, 80};

int C[10]

After the execution of code array C should have following elements:

30, 40, 45, 50, 60, 70, 75, 80, 85, 90

14. Populate an array of size 100 with values generated randomly between 1 to 1000.
Copy all the numbers divisible by 8 or 15 to a new array. Display both arrays.
15. Write code to find second largest element in a 1D Array.