

## Array

1. Fill an array with integers (any size) with user input and print the array forwards and backwards.
2. Fill an array with 100 integers having random numbers. Then find the largest, smallest and the average value.
3. Take two integers from the user. Fill an integer array of size 25 with random values between the two numbers given by the user. Print the array.
4. Ask the user to enter the size of an array. Create an integer array of the given size and fill it with random numbers. Print the array, then take another number from the user and search that number in the array. If the value is found, print the indices (plural of index) where the value was found. Also print how many times the value was found in the array.
5. Create two floating-point arrays. Fill them with random numbers. Sort the first array in descending order and the second array in ascending order. Print both arrays before and after sorting.
6. Create an integer array of size 10. Fill the array by taking input from the user. Then, check whether the array is sorted or not. If sorted, then, how it is sorted (ascending or descending). If it is not sorted, print that it is not sorted.
7. Find the 1st maximum, 2nd maximum, 1st minimum, 2nd minimum and the median value from a floating-point array of size 11.
8. Fill an integer array with random numbers. Separate the even numbers and store them in an array named evenArray and odd numbers in another array named oddArray. Print all three arrays.
9. Take a number from the user. Create an array of that size. Fill the array with Fibonacci series. Print the array.
10. Find how many prime numbers are there in an array.
11. Convert a decimal number to binary number.
12. Write a program that counts the number of times each number occurs in an array.
13. Create a 5x3 integer array. Fill it with random numbers between 30 and 50. Print the array.
14. Create two 4x3 integer matrices called A and B. Subtract A from B and store the resultant matrix in C. Print A, B and C matrices.
15. Take the size of a matrix, A from the user. Create the matrix, A and fill it with user input. Then, transpose of A in another matrix B. Print both A and B.
16. Create a matrix, A of size 4x3 and B of size 3x2. Fill both matrices with random numbers. Multiply A and B and store the resultant matrix in C. Print A, B and C.
17. Count the number of prime numbers in a 2D integer array.
18. Compute the average value of each of the rows of a 15x10 floating-point array.
19. Convert a 5x7 (2D) integer array to a 1D array.
20. Convert a 1D array of size 10 to a 2x5 or 5x2 (2D) array (make sure no data is lost).
21. Create a 5x5 matrix. Compute the sum of the values along the two diagonal. Print the sum separately.