

Noakhali Science and Technology University
Course Title: Structured Programming Language Lab
Course Code: CSTE-1202

LAB-4: Arrays

1. Write a program to take some numbers into an array and calculate median of the array elements.
2. Write a program to find elements from an array that are larger than the average.
3. Write a program to reverse an array of real numbers.
4. Some random integer numbers are stored in an array. Write a program to print out how many of them are even and how many are odd.
5. Insert some random numbers into an array so that each number appears in the array at most once.
6. Write a program to compute the addition of $n \times m$ matrices.

Practice Problems:

1. Write a program to take some numbers into an array and calculate the sum and average of the array elements.
2. Write a program to pick up the largest/smallest number from a list of numbers.
3. Write a program to sort a list of numbers in an ascending / descending order (selection sort).
4. Write a program to convert a decimal number to its binary equivalent.
5. Suppose somehow we read n integer numbers from a file into an array declared by **int x[100]**. We know that all the values are integers between 0 and 10. Write a program to find how many 0's, 1's, ..., 10's exist in the array **x**.
6. Write a program to compute the multiplication of two $n \times m$ matrices.
7. Write a program to transpose a matrix.
8. Assume we have two sets of numbers represented by A and B. Write a program to find union, intersection and difference of the two sets.

For example

A={3,4,5} and B={2,3,5,7}

A \cup B = {2,3,4,5,7}

A \cap B = {3,5}

A - B = {4}

B - A = {2,7}