Tutorial-5
EEN-103

1. Write a C++ program to

   - reverse an integer 1-D array,
   - sort it in ascending order,
   - sort it in descending order.

2. Ten numbers are entered from the keyboard into an array. Write a program to find out the number of positive, negative, odd and even elements.

3. Consider a scalar map, $x \mapsto ax$ for any $0 < a < 1$. The behavior of this map can be captured by the dynamical system $x(n+1) = ax(n)$, where the iteration begins from $n = 0$. Write the code to display the ordered pairs (x, ax) for a certain iteration in a two-dimensional array.

4. Write a program that declares three variables: 'first_value' and 'second_value' of type `int` and 'mypointer' of type `int *`. Initialize the variables of type int and display their values. Then modify their values through 'mypointer' and display the modified values. Understand the use of address operator (&) and dereferencing operator (*).

5. Write a program given a 2D array i.e., `int Array[3][3]` $= \{\{1,2,3\},\{4,5,6\},\{7,8,9\}\}$. Display the elements in 3×3 form

    i) without using pointer,
    ii) with the address of each element,
    iii) using & reference operator and using pointer.

6. Write a program to add two arrays A and B of size $m \times n$.