# C - Programing Tasks

**1. sorting of array in ascending and descending order based on user input and filter**

step 1: Get array length from the user

step 2: Get the array values from user using for-loop up to user defined length

step 3: Get the user input for ascending or descending order and check the if condition i.e., "TRUE" means

call ascending func else descending func

step 4: Using nested for-loop and if condition to sort the values and return the sorted array.

step 5: print the sorted values using for loop

step 6: Get the user input for print the < or >number ( user defined value ) from the sorted array.

step 7: Using for loop to iterate and check the "i" value with if-condition (i < len of array && i != user input) . and increment the i value and call the same function to print the filtered value.

**2.Find the index of an element**

step 1: Get the values for array using for loop

step 2: Get the input for which the index of the element to be find.

step 3: iterate the a[i] value using for loop

step 4: check the value a[i] value and user input

step 5:if the value equal print the i value (i holds the position)

**1. Sorting using based on of array user input:**

**Task Details**

* Create an array to store a multiple inputs.
* Get the length of array and value from user.
* Then Sort the array by ascending or descending based on user input.
* The user input values in an array will be arrange in the increasing or decreasing order based on the user selection.

**Solution**

* Here we have to compare the lower limit element with next position element if the element is greater than the lower limit swap the element for ascending order or vice-versa for descending.

**2. Filter the < or >number from the user defined element.**

**Task Details**

* + - Create an array and get the length of array and value from user.
    - Get the base number from which to be find minimum and maximum from user.
    - The greater than or lessen values in the array will be displayed from the user input base value.

**Solution**

* The user will select one value based on their input we have to sort the array and filter the greater or less than values by fixing the user selected value as initial value.

**3. Print the index of the element in array:**

**Task Details**

* Create an array that get the values from the user.
* Get the value from which element index to be find.
* The user will select one value from their input to find the index i.e. position of the element in an array.

**Solution**

* The position of the element is identified by the index of the element
* I.e. Index is the n-1 of position, so the output value will be n-1’th position of the user input to displayed .(index starts with ‘0’ and position starts with ‘1’)

**4. Sorting using based on of array user input using switch statement:**

**Task Details**

* Create an array to store a multiple inputs.
* Get the length of array and value from user.
* Then Sort the array by ascending or descending based on user input.
* The user input values in an array will be arrange in the increasing or decreasing order based on the user selection.

**Solution**

* Based on user input the logic cases will be executed in the switch condition i.e. condition satisfy case 1 it will be executed or else switch to other case.
* Here we have to compare the lower limit element with next position element if the element is greater than the lower limit swap the element for ascending order or vice-versa for descending.

**5. Sorting fine tuning:**

**Task Details**

* Create an array to store a multiple inputs.
* Get the length of array and value from user.
* Then Sort the array by ascending or descending based on user input.
* The user input values in an array will be arrange in the increasing or decreasing order based on the user selection.

**Solution**

* By using Ternary operator, which condition to be applied for ascending or descending the array will be defined.
* Then we have to compare the lower limit element with next position element if the element is greater than the lower limit swap the element for ascending order or vice versa for descending and iterate the condition for all the elements in the array. At last print the sorted array