# Week 1

1. Write the pseudocode for finding duplicate values in an array.

Pseudocode for finding duplicate values in an array:

1. Declare an array with numbers in it.
2. Use two loops in order to find the duplicate values in an array.
3. Outer loop to iterate through the array form 0 to the length of the array which selects the element.
4. The inner loop compares each element of the array with the selected element from the outer loop.
5. If the match is found than display it as a duplicate element.

**Week 2**

1. Read the degree of two polynomials and their coefficients, all integers, from the standard input. The polynomial is of the form ( ) = ∗ + ⋯ + 1 ∗ 1 + , where 0 ≠ 0.
   1. Write the pseudocode for adding two polynomials.
      1. Declare two Array with name A and B respectively.
      2. Declare two variable x and y as the length of two declared array A and B respectively.
      3. Declare variable named as Size to store the maximum length of the array.
      4. Declare array Sum of length as Size.
      5. Use two loops to add the numbers in an array as a polynomial.
      6. First loop to store each element of the array A in Sum.
      7. Second loop also adds the elements of array B in sum by adding with each element of sum identifying the similar index number.
      8. Display sum.
   2. Write the pseudocode and code for a function that determines whether given word is palindrome. What is the time complexity (expressed using BigO notation)?

Pseudocode that determines whether a given word is palindrome:

* + 1. Create an array of characters of required size.
    2. Enter the string that you want to check whether it is a palindrome or not.
    3. Now make a for loop and start comparing the elements at the positions i and n-1-i. (where i runs from 0 to size of the array -1)
    4. If all the compared element matches, then the expression entered is a palindrome.