**Assignment 3**

***Topics: One D-Dynamic Arrays  
  
Due Date:19th June, 2021,8:00 PM Total Marks: 20***

***Note:   
For 100 % marks there should be no memory leakage, space wasted, and dangling pointers in your code and make use of helper functions instead of fitting all the code in one function.  
  
Submissions will be on portal, under Assignment 3 submission folder  
  
Late Assignment is allowed upto 2 days late with penalty of -2 under folder named Late Submission Assignment 3 on portal***

**Question 1:**

Write functions based c++ program that reads some integers from a file in an array tells if the integer array contains two 7's next to each other, or there are two 7's separated by one element, such as with {7, 1, 7}, if it exist then update the array by keep the last 7 in it, The function should return the modified array.

Note: there must be no memory leakage and no dangling pointers

**Sample Outputs:**  
sample Input array : 1, 7, 7  
output: 1,7

sample Input array :1, 7, 1, 7 ,8   
output: 1,1,7,8

sample Input array : 1, 7, 1, 1, 7  
output: 1,7,1,1,7

**Question 2:**

Write functions based C++ program that reads a single line sentence from a fileinto a dynamic array of type characters (Cstring) and look for 3 letter patterns in it.  
Input a 3 letter patterns you are looking for let’s say "zip” in the string starting with 'z' and ending with 'p'. Process each word such that for all such words, the middle letter is gone, so "zipXzap" yields "zpXzp" and then print the modified array on screen:

S**ample input array:**

**zipXzap zopzop zzzopzop zzzpzpst**

**Input 3 letter pattern: zip**

**Sample Output array:**

**zpXzp zpzp zzzpzp zzpzpst**