

# CS1005: Assignment #4

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### 1 Problem 1

For a given array of  $n$  integers where assume that '0' is an invalid number and all others as a valid number. Convert the array in such a way that if both current and next element is valid and both have same value then double current value and replace the next number with 0. After the modification, rearrange the array such that all 0's shifted to the end.

Input : arr[] = 2, 2, 0, 4, 0, 8  
Output : 4 4 8 0 0 0

Input : arr[] = 0, 2, 2, 2, 0, 6, 6, 0, 0, 8  
Output : 4 2 12 8 0 0 0 0 0 0

### 2 Problem 2

Write a program to insert student information. Take input from the

- Roll\_No
- Name
- Course Id (If possible take 4 courses as array courses[4])
- Marks (If possible take 4 marks as array for each course[4])

Using the Linked list perform following operation. Create function for all the operation.

- Insert n students information
- Print the student information
- Insert a student information at the head
- Print the student information
- Insert a student information at the end
- Print the student information
- Print only kth student information

**Imp Point:** Use structure for storing student information(use dynamic memory allocation for each structure node)

**Important Points:-**

- Implement it using C language.
- Total Marks: 15 (6+9 )