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| aLgorithm Questions | Solutions |
| Find missing element from 1 to (n-1) | Find n(n+1)/2 - array sum |
| Check if a pair of element is present such that their sum is given sum | Two pointer sum - keep 2 pointers in left and right and move it one by one |
| Copy linked list with arbitrary pointer :  You are given a linked list where the node has two pointers. The first is the regular ‘next’ pointer. The second pointer is called ‘arbitrary\_pointer’ and it can point to any node in the linked list.  Your job is to write code to make a deep copy of the given linked list. Here, deep copy means that any operations on the original list (inserting, modifying and removing) should not affect the copied list. | Copy the data and next nodes  Make main list's next = corresponding copy node  Make the copy list's arbitrary = corresponding main node  copy->arbitrary = copy->arbitrary->arbitrary->next  do the same for all nodes |
| Find Subarray with the given sum:  RETURN THE FROM AND TO INDICES OF AN SUBARRAY FROM AN ARRAY WHICH HAS THE SUM EQUAL TO THE GIVEN SUM | Current\_sum = arr[0], start = 0  First, traverse I from 1 to n  Here while current\_sum<sum and start < i-1, current\_sum – arr[start] and start+=1.  Check for each I if current\_sum = sum. And return start , i-1  <https://www.geeksforgeeks.org/find-subarray-with-given-sum/> |
| count triplets :  triplets are those where any of the 2 numbers’ sum gives the next number. unsorted list | Sort the list  Traverse from the last  Pass all the prevailing elements to **2 pointer sum** function counting if the sum of any 2 numbers gives the first number in the above traversal |
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