

**CSE3032 - Competitive Programming**

**WIN SEM (2022-2023) AMR**

**Class Number: AP2022236001007**

**Slot: L11+L12+L19+L20**

**ASSIGNMENT - 4**

Last Date for Submission: Wednesday (02-02-2023)

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Write the program using (C / C++ / Java / Python) to solve the following problems.

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| **S.No** | **Problem Name** | **Statement** |
| 1 | Number of  Subsequences  That Satisfy the  Given Sum Condition | Return the number of non-empty subsequences of nums such that the **sum of the minimum and maximum** element on it is less or equal to target.  Input: nums = [3,5,6,7], target = 9  Output: 4  Explanation: There are 4 subsequences that satisfy the condition.  [3] -> Min value + max value <= target (3 + 3 <= 9)  [3,5] -> (3 + 5 <= 9)  [3,5,6] -> (3 + 6 <= 9)  [3,6] -> (3 + 6 <= 9)  Input: nums = [3,3,6,8], target = 10  Output: 6  Explanation: There are 6 sub-sequences that satisfy the condition. (nums can have repeated numbers).  [3] , [3] , [3,3], [3,6] , [3,6] , [3,3,6] |
| 2 | Subsequence | Check if there is a subsequence whose sum is divisible by 3 arr = [1,1,1,1,1,2,2], after two operations, pairs gets out [1,2],[1,2] with sum(%3==0) |

**Note:**

* If Code similarity is found, assignment will not be considered and Zero (0) Marks will be awarded.
* You have to upload a single document consisting of all the above programs and corresponding Output.
* You will be asked to explain the code, run and show the same program in the respective platforms (hacker rank / hacker earth / spoj)

1) Number of Subsequences that satisfies the Given Sum condition:

Code: