Etraveli Group Recruitment 2024
Welcome

1.Candidate needs to address 2 programs , you have either option for each problem statement .

2.Candidate needs to use Java programming language -preferred . If you are not comfortable with Java you can also use C++ .

3.Include rough work into submission .

All the best!
Section A

Q1.
A person has small boxes arranged on a line from 1 to N . For each valid i, the weight of the i-th box is W(i) . He wants to bring them to his home, which is at the position 0. He can hold any number of boxes at the same time. However, the total weight of the boxes he is holding must not exceed K at any time, and he can only pick the ith box if all the boxes between his home and the ith box have been either moved or picked up in this trip. Therefore, he will pick up boxes and carry them home in one or more round trips. Find the smallest number of round trips he needs or determine that he cannot bring all boxes home.

Example:-

K=6   W(i…) = 3,4,2 Answer:- 2

K=6   W(i…) = 3,4,3 Answer :- 3

OR

Q2.
There is an ID card swipe system at the entrance of an office. Each employee is assigned a unique ID card that they use to swipe in and out. The system records every swipe, capturing the first swipe of an ID as in, second as out, third as in, and so on. Given an array consisting of IDs denoting swipes throughout the day, find the maximum number of people in the office at any time. Note that there is nobody inside the office before the first swipe.

Example:-

In out ID array = {1,2,1,5,4}   Answer:- 3
Here employees with IDs 2,5,4 are in the office. Thus at some point of time the maximum count had reached 3.

{1,1,1,2}   Answer :- 2
{3,5,2,4,1}   Answer:- 5
{1,2,2,1}   Answer:- 2

Section B

Q1.

Write a program to print transpose of a matrix.
Transpose of a matrix means interchanging the rows into columns and columns into rows.

Example:-
1 3 4
2 4 3
3 4 5

Answer:-
1 2 3
3 4 4
4 3 5

OR

Q2.

Given two strings, the task is to find if a string can be obtained by rotating another string by two places.

Input: string1 = "amazon", string2 = "azonam"
Output: Yes
Explanation: Rotating string1 by 2 places in anti-clockwise gives the string2.