COMP-104 : Exploring Computer Engineering , Assigment 1 **14.03.2023**

In this assignment , you are expected to solve the following questions and upload the solutions to Canvas.

- Upload a zip or rar file **containing the .c extension files** of the solutions to the questions.
- **Duration :** 40 minutes

Q1. Write a program that asks the user to enter a TL amount and then shows how to pay that amount **using smallest number** of 20tl , 10tl , 5tl and 1tl bills.

Hint : Divide the amount by 20 to determine the number of 20 tl bills needed , and then reduce the amount by the total value of the 20 tl bills. Repeat for other bill sizes.

Input Format : Single integer , **n**

Constraints : The number **n** must be greater than or equal to 20.

Output Format : If n<20 , print "n must be greater than or equal to 20". Otherwise, print how many times each banknote is used.

Sample Input : 93

Sample Output :

20 tl bills : 4

10 tl bills : 1

5 tl bills : 0

1 tl bills : 3

Q2. Suppose that we have two different objects or points in a cartesian coordinate system in two dimensions. And we want to measure the distance between these two points. We can use a number of different metrics to measure the distance. But in this question , you will use "**Manhattan Distance**".

One of the points is **x = (a,b) ,** and other point is **y = (c,d).** Manhattan distance between x and y points is **:**

Distance = |a-c| + |b-d|

For example ;

x = (-1,7)

y = (4, 3)

Distance = |-1-4| + |7-3| = 5 + 4 = 9

Task : Take 4 integer value from user (a,b,c,d). Write a program that asks the user to enter 4 integer value. And prints the result after calculating the manhattan distance.