Assignment 3

Instructions:-
1. **You need to upload a pdf file for this assignment**
2. **Format:- Q1 code, screenshot of Q1 output , Q2 code, Q2 screenshot of output and so on in the sequence.**
3. **File Naming convention :- ID_Lab02.pdf**
   a. **Eg:- 202011002_Lab02.pdf**

1 Program to rearrange array elements having positive and negative elements such that the negative elements appear before the positive ones:
EG: input: 1,100,-1,5, -3,5,-8, -4
output: -1,-3,-8, -4, 1,100,5,5

2 program to find the number which occurs more than n/2 times where n is the number of elements in the array(If n is odd then take floor(n/2))
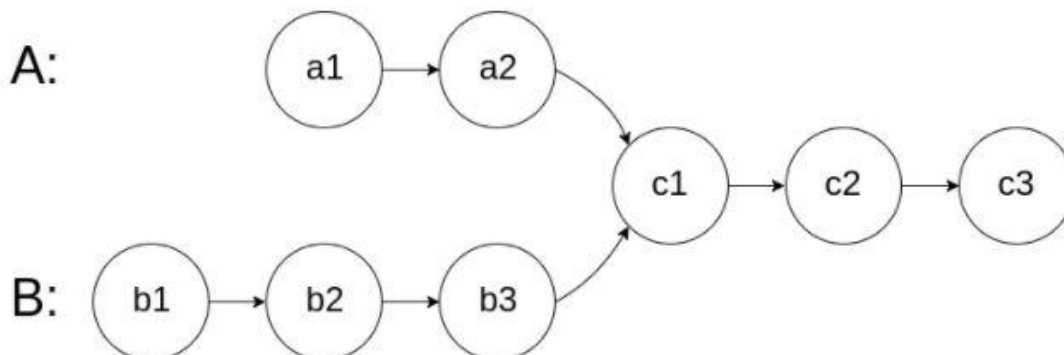EG: input:- 1 2 3 1 3 2 2 2 3 3 3 3 3 3, n = 14
      output: 3

3 program that finds the intersection of two linked lists
EG : input: l1:- a1->a2->c1->c2->c3
           l2:- b1->b2->b3->c1->c2->c3

A: a1 → a2 → c1 → c2 → c3

B: b1 → b2 → b3 →(c1)

    output: c1->data

4 Find the missing number in an unsorted array between 1 to n

EG : input:- n=5(n is the range of elements starting from 1, arraysize: n-1)

Hint: Sum of n natural numbers:- $(n * (n+1)) / 2$

    array = 3 4 5 2

    output: 1

5 Merge two sorted linked list such that the resultant list is also a sorted list

EG: input: l1: 1->2->5->9->10

          L2: 2->3->6->11

   Output:- 1->2->2->3->5->6->9->10->11