CS2302 Data Structures
Spring 2020
Quiz 3

Open notes. You may request assistance from TA, IA, PL, and instructor

1. Write the function appears_in_all_rows(A,i) that receives a 2D numpy array A and an integer i and determines if i appears at least once in every row of A.
2. Write the function equal_first_and_second(L) that receives an object of type List (as described in singly_linked_list.py) and determines if the first and second items in L are equal. That it, it should return True if the first and second elements are equal and False if they are different or L has less than two elements. Note: the function should run in O(1) time.
3. Write the function replace(L,i,j) that receives an object of type List (as described in singly_linked_list.py) and integers i and j and replaces all occurrences of i by j in L.
4. Write the function remove_all_but_first_and_last(L) that receives an object of type List (as described in singly_linked_list.py) and removes all nodes except the first and last. If L has less than two elements, your function should do nothing. Note: the function should run in O(1) time.