

COMPUTER PROGRAMMING

QUIZ 2

Instructor: Giris Varma Course Code: CSO.1011IT Hyderabad

Problems are in comments.

Name: _____

RollNo: _____

Tie the question paper to the answer sheet.

For Evaluators only

No.	1	2	3	4	Evaluator
Marks					

Total: _____ / 50

```

#include <stdio.h>
#include <stdlib.h>

// defines strcmp (first_str, second_str);
// if first_str is equal to 'second_str'
// returns 0, otherwise returns a nonzero value
#include <string.h>
// defines type 'bool' and macros true and false
typedef enum RelStatus {
    NotMentioned,
    Single,
    Engaged,
    Married
} RelStatus;

typedef struct Node Node;
typedef Node LinkedList;

typedef struct Person {
    char name [100];
    int age;
    RelStatus relstatus;
    LinkedList * friends;
} Person;

struct Node {
    struct Person data;
    struct Node next;
}

typedef struct SocialNet {
    LinkedList members;
} SocialNet;

LinkedList append (Person p, LinkedList l) {
    if (l == NULL) {
        Node n = (Node) malloc(sizeof(Node));
        n->data = p;
        n->next = NULL;
        return n;
    } else {
        l->next = append (p, l->next);
        return l;
    }
}

int size(LinkedList l) {
    return l != NULL ? 1 + size(l->next) : 0;
}

Person* find_person_by_name (char* name, LinkedList l) {
    // Q1: Return the pointer to the Person whose name is 'name' in the LinkedList
    // given by argument 'name' in the LinkedList
    // (10 marks)

    bool common_single_friend (char* name1, char* name2, SocialNet s) {
        // Q2: Check if the Persons with name = name1 and name = name2 has a common friend who is Single. Return true or false
        // (10 marks)

        char* most_popular_person (SocialNet s) {
            // Q3: Return the name of the person who is in the friends list of most number of people
            // (15 marks)

            bool all_members_with_only_two_young_friends (SocialNet s, int age_upper) {
                // Q4: Check if all members in the social network 's' have exactly two friends whose age is ( 'age_upper' ). Return true or false
                // (15 marks)
            }
        }
    }
}

```