Daffodil International University
Department of Software Engineering
Faculty of Science & Information Technology
Lab Final, Spring 2024
Course Code: SE132, Course Title: Data Structures
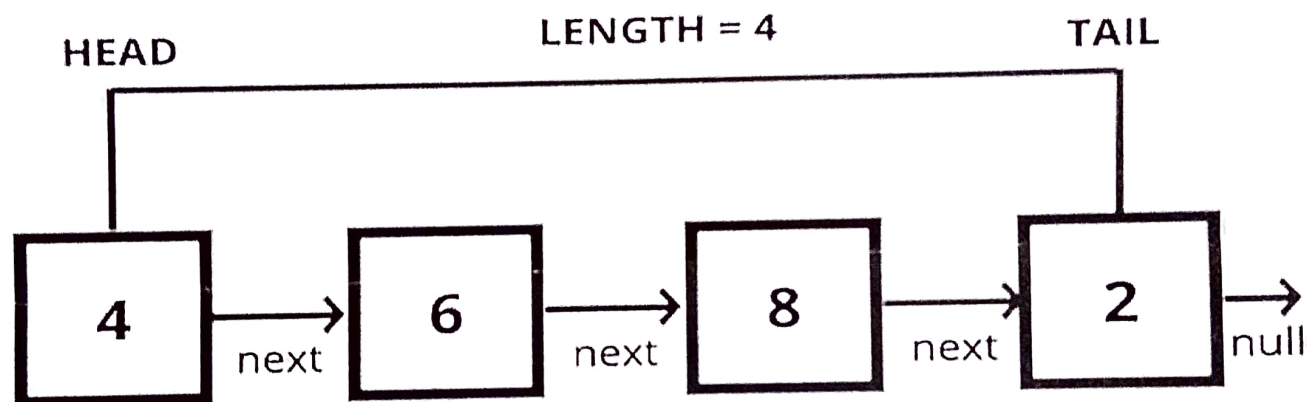Level: 2 Term: 2 Section: III
Instructor: RKN

1. Suppose you have an array of

"Tom"	"Peter"	"John"	"Clark"	"Harry"	"Simu"

- Write a code for replacing "Clark" in this array with "Muller".
- "Simu" was left out of the array group, leaving a space in the array, Now you want to write a code that will move the empty space in the first of that array.

2.

Write a program that will create a linkedlist as shown in the picture above.

3.

1	2	3	4	5	6	7	8	9	10

- Write a program to find 3 in this array using binary search.

4. Complete the following Code

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


struct node {
    int item;
    struct node* left;
    struct node* right;
};

void preorderTraversal() {

}

struct node* createNode(int data) {
    struct node* newNode = (struct node*)malloc(sizeof(struct node));
    newNode->item = data;
    newNode->left = NULL;
    newNode->right = NULL;
    return newNode;
}

struct node* insertLeft() {

}
struct node* insertRight() {

}

int main() {
    struct node* root = createNode(90);
    insertLeft(root, 35);
    insertRight(root, 15);
    insertLeft(root->left, 500);
    preorderTraversal(root);

    return 0;
}
```