

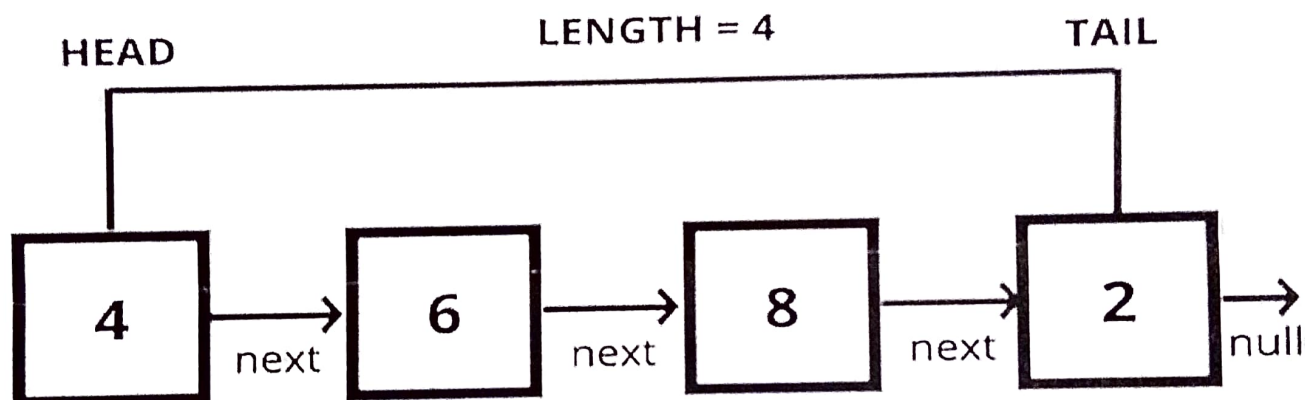
Department of Software Engineering
Faculty of Science & Information Technology
Lab Final, Spring 2024
Course Code: SE132, Course Title: Data Structures
Level: 2 Term: 2 Section: III
Instructor: RKN

1. Suppose you have an array of

"Tom"	"Peter"	"John"	"Clark"	"Harry"	"Simu"
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- 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
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- Write a program to find 3 in this array using binary search.

4. Complete the following Code

```
#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;
```

```
}
```