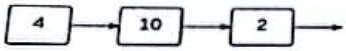
Data Structures and Algorithms Solution

Quiz # 1(CLO-1)

Name:	Roll#

1. Consider the following linked list and write the code according to the statements. Remember that after every operation you have to redraw the linked list and apply operation to the updated linked list in the next part. (use loop for max credit)



a) Insert a node after 2 with 7 as data.

```
node *temp= ~~head~~ new node (7);
head->next->next->next= temp;
```

4 → 10 → 2 → 7

b) Delete node 10.

```
node * temp = head->next;
head->next= temp->next;
delete temp;
temp= NULL;
```

4 → 2 → 7

c) Delete node 2

Same as above

2. Write a function that counts the number of the nodes in a linked list.

```
int ReturnCount(Node *& head)
{
int i=0; node *temp= head;
while (temp!= NULL) {
    i++;
    temp= temp->next;
}
return i;
```

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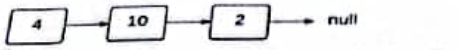
B

Data Structures and Algorithms

Quiz # 1(CLO-1)

Name: M. Sameer Asad	Roll# F202310520 5

1. *Consider the following linked list and write the code according to the statements. Remember that after every operation you have to redraw the linked list and apply operation to the updated linked list in.the next part. (use loop for max credit)*



a) Insert a node after 2 with 7 as data.

```
a- void insertTail(int data)        // Data = 7
   {
      Node *temp = head;
      while (temp->next != NULL)
      {
         temp = temp->next;
      }
      temp->next = new Node(data);
   }
```

2/

b) Delete node 10.

```
b- void deletNode()
   {
      Node* temp = head;
      int val = 10;
      while (temp->next->data != val)
      {
         temp = temp->next;
      }
      Node * tempDel ;
      tempDel = temp->next;
      temp->next = tempDel->next;
      delete tempDel;
   }
```

3

c) Delete node 2

temp 4 → 10 → 2 → NUL

update 4 → 2

2

2. *Write a function that counts the number of the nodes in a linked list.*

```
int ReturnCount(Node *& head)
{
   Node *temp = head;
   int count = 0;
   while (temp->next != NULL)
   {
      temp = temp->next;
      count = count + 1;
   }
   return count;
}
```

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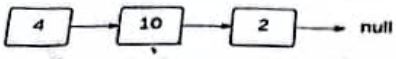
A

Data Structures and Algorithms

Quiz # 1(CLO-1)

Name: Faisal Pervaiz	Roll# F2023105044

1. Consider the following linked list and write the code according to the statements. Remember that after every operation you have to redraw the linked list and apply operation to the updated linked list in the next part. (use loop for max credit)



a) Insert a node after 2 with 7 as data.

```
Node *temp = temp;
temp -> next = new (7);
temp*Head = new -> temp -> next;
```

2/

b) Delete node 10.

```
Node *head = temp;
temp todelete = temp->next;
```

1

c) Delete node 2

```
Node *head = temp
temp -> next;
temp todelete = temp ->next->next;
```

1

2. Write a function that counts the number of the nodes in a linked list.

```
int ReturnCount(Node *& head)
{
```

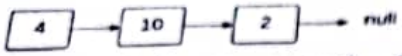
10W

Data Structures and Algorithms

Quiz # 1(CLO-1)

Name: Ali Hussnain	**Roll#** F2023105025

1. Consider the following linked list and write the code according to the statements. Remember that after every operation you have to redraw the linked list and apply operation to the updated linked list in the next part. (use loop for max credit)



a) Insert a node after 2 with 7 as data.

Node, Temp1, Temp 2 -> Temp 3 -> Temp 4

Cout << " Temp 4 = 7 "

Node Temp * 4

b) Delete node 10.

Head *Temp1 -> delete Temp2 -> Temp 3

Head -> Temp 1 -> Temp3

c) Delete node 2

Head * Temp1 -> Temp 2 -> delete Temp3

Head * Temp1 -> Temp2

2. Write a function that counts the number of the nodes in a linked list.

```
int ReturnCount(Node *& head)
{
```