LAB-05 Singly Linked List

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Lab-05 code

Task # 1: Implement a SinglyLinkedList class

```
home > kashiii > Downloads > 20k1887 Muzamil Lab 3 > € linkedList.cpp > ₹ Node > ♀ Node()
      #include<iostream>
       using namespace std;
  3
       class Node {
  4
           public:
  5
               int data;
  6
               Node *next;
  8
           Node(const int data)
  9
 10
               this->data = data;
 11
 12
               this->next = NULL;
 13
 14
           Node()
 15
 16
               this->data = 0;
 17
               this->next = NULL;
 18
 19
 20
       };
 21
 22
       class linkedList {
 23
           public:
 24
               Node *head;
 25
               Node *tail;
 26
 27
 28
           linkedList() {
 29
               this->head = NULL;
 30
               // this->tail = NULL;
 31
 32
```

Task # 2: Add a node at the end of a Singly Linked List.

```
void linkedList::pussh(int n) {
74
75
         Node *temp = new Node;
         temp->data = n;
76
         temp->next = NULL;
77
78
         if(head == NULL)
79
80
             head = temp;
81
             // tail = temp;/
82
83
         else
84
85
86
             Node *t = head;
             while(t->next!=NULL)
87
```

t = t->next;

t->next = temp;

Task # 3: Add a node at the front of a Singly Linked List

```
void linkedList::front(int n) {

Node *temp = new Node;
temp->data = n;
temp->next = head;

// tail = temp;
head = temp;
}
```

Task # 4: Add a node after a given node in a Singly Linked List

```
void linkedList::insertIndex(int in, int v)
 96
 97
          Node *temp = new Node;
98
          temp->data = v;
99
100
          if(head == NULL)
101
102
              head = temp;
103
104
          else
105
106
              Node *p = head;
107
              for (int i = 1; i < in-1; i++)
108
109
```

p = p->next;

temp->next = p->next;

// cout<<p->data<<endl;</pre>

p->next = temp;

Task # 5Delete a node from a Singly Linked List - Delete Last node - Delete any other node

```
void linkedList::deleteEnd()
170
171
          Node *temp = head;
172
          Node *pre = head;
173
          while(temp->next!=NULL)
174
175
176
              pre = temp;
              temp = temp->next;
177
178
179
          delete temp;
                                                             Delete last Node
          pre->next = NULL;
180
181
182
```

Task # 5Delete a node from a Singly Linked List - Delete Last node - Delete any other node



```
Task # 6
Update a node in a Singly Linked List

void linkedList::updateList(int in, int v)

{
Node *temp = new Node;
temp->data = v;
```

if(head == NULL)

else

head = temp;

Node *p = head;

p->next = temp;

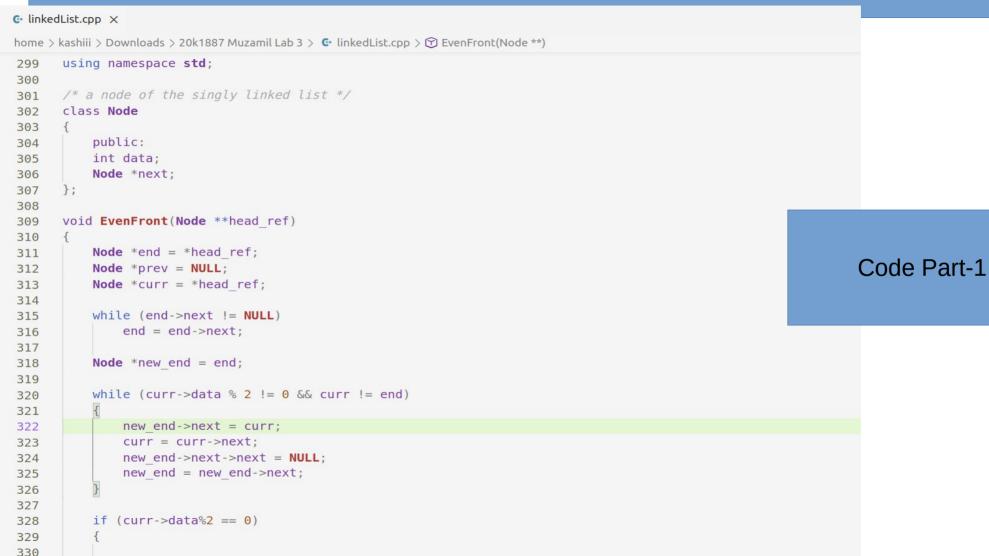
p = p - next;

temp->next = p->next;

// cout<<p->data<<endl;</pre>

for (int i = 1; i < in-1; i++)

Task # 7



Task # 7

```
home > kashiii > Downloads > 20k1887 Muzamil Lab 3 > € linkedList.cpp > € EvenFront(Node **)
327
328
          if (curr->data%2 == 0)
329
330
331
              *head ref = curr;
332
333
              while (curr != end)
334
335
336
                  if ( (curr->data) % 2 == 0 )
337
338
                      prev = curr;
339
                      curr = curr->next;
340
341
                  else
                                                                                                                       Code Part-2
342
343
                      prev->next = curr->next;
344
                      curr->next = NULL;
345
346
                      new end->next = curr;
347
                      new_end = curr;
348
349
                      curr = prev->next;
350
351
352
353
354
          else prev = curr;
355
356
          if (new end != end && (end->data) % 2 != 0)
357
358
              prev->next = end->next;
359
              end->next = NULL;
360
361
              new end->next = end;
362
```

return;

The End Thank You