

C:\Users\SUTONU DHARA\Downloads\single linked list.cpp - Dev-C++ 5.11

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TDM-GCC 4.9.2 64-bit Release

(globals)

Project Classes Debug

single linked list.cpp

```
1  #include<stdio.h>
2  #include<stdlib.h>
3  struct node
4  {
5      int data;
6      struct node *next;
7  };
8  struct node *start;
9
10 void insert_begin();
11 void insert_last();
12 void insert_locc();
13 void delete_begin();
14 void delete_last();
15 void delete_locc();
16 void print();
17 int main ()
18 {
19     int ch=0;
20     while(ch!=8)
21     {
22         printf("\nEnter the operation to be performed:\n");
23         printf("\n1.Insert in the begining\n2.Insert at last\n3.Insert at any specified position\n4.Delete from Beginning\n5.Delete from last\n6.Delete node after\n");
24         scanf("%d",&ch);
25         switch(ch)
26         {
27             case 1:
28                 insert_begin();
29                 break;
30             case 2:
31                 insert_last();
32                 break;
33             case 3:
34                 insert_locc();
35                 break;
36             case 4:
37                 delete_begin();
38                 break;
39             case 5:
40                 delete_last();
41                 break;
42             case 6:
43                 delete_locc();
44                 break;
45             default:
46                 break;
47         }
48     }
49 }
```

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Project Classes Debug

single linked list.cpp

```
34         insert_locc();
35         break;
36     case 4:
37         delete_begin();
38         break;
39     case 5:
40         delete_last();
41         break;
42     case 6:
43         delete_locc();
44         break;
45     case 7:
46         print();
47         break;
48     case 8:
49         exit(0);
50         break;
51     default:
52         printf("Enter valid option");
53     }
54 }
55 }
56 void insert_begin()
57 {
58     struct node *p;
59     int value;
60     p=(struct node *) malloc(sizeof(struct node *));
61     if(p==NULL)
62     {
63         printf("\nOVERFLOW");
64     }
65     else
66     {
67         printf("\nEnter value:\n");
68         scanf("%d",&value);
69         // ...

```

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(globals)

Project Classes Debug

single linked list.cpp

```
67     printf("\nEnter value:\n");
68     scanf("%d",&value);
69     p->data=value;
70     p->next=start;
71     start=p;
72 }
73 }
74 void insert_last()
75 {
76     struct node *p,*temp;
77     int value;
78     p=(struct node*)malloc(sizeof(struct node));
79     if(p==NULL)
80     {
81         printf("\nOVERFLOW");
82     }
83     else
84     {
85         printf("\nEnter value:\n");
86         scanf("%d",&value);
87         p->data=value;
88         if(start==NULL)
89         {
90             p->next=NULL;
91             start=p;
92         }
93         else
94         {
95             temp=start;
96             while(temp->next!=NULL)
97             {
98                 temp=temp->next;
99             }
100             temp->next=p;
101             p->next=NULL;
102 }
```

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(globals)

Project Classes Debug

single linked list.cpp

```
100     temp->next=p;
101     p->next=NULL;
102 }
103 }
104 }
105 void insert_locc()
106 {
107     int i,loc,value;
108     struct node *p, *temp;
109     p=(struct node *)malloc(sizeof(struct node));
110     if(p==NULL)
111     {
112         printf("\nOVERFLOW");
113     }
114     else
115     {
116         printf("\nEnter element value:");
117         scanf("%d",&value);
118         p->data=value;
119         printf("\nEnter the location after which you want to insert: ");
120         scanf("%d",&loc);
121         temp=start;
122         for(i=0;i<loc;i++)
123         {
124             temp=temp->next;
125             if(temp==NULL)
126             {
127                 printf("\ncan't insert\n");
128                 return;
129             }
130         }
131         p->next=temp->next;
132         temp->next=p;
133     }
134 }
```

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(globals)

Project Classes Debug

single linked list.cpp

```
133     }
134 }
135 void delete_begin()
136 {
137     struct node *p;
138     if(start==NULL)
139     {
140         printf("\nList is empty\n");
141     }
142     else
143     {
144         p=start;
145         start=p->next;
146         free(p);
147     }
148 }
149 void delete_last()
150 {
151     struct node *p,*p1;
152     if(start==NULL)
153     {
154         printf("\nlist is empty");
155     }
156     else if(start->next==NULL)
157     {
158         start=NULL;
159         free(start);
160         printf("\nOnly node of the list deleted ...\n");
161     }
162     else
163     {
164         p=start;
165         while(p->next!=NULL)
166         {
167             p1=p;
```

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(globals)

Project Classes Debug

single linked list.cpp

```
166 {
167     p1=p;
168     p=p->next;
169 }
170 p1->next=NULL;
171 free(p);
172 }
173 }
174 void delete_locc()
175 {
176     struct node *p,*p1;
177     int loc,i;
178     printf("\n Enter the location of the node after which you want to perform deletion: \n");
179     scanf("%d",&loc);
180     p=start;
181     for(i=0;i<loc;i++)
182     {
183         p1=p;
184         p=p->next;
185
186         if(p==NULL)
187         {
188             printf("\nCan't delete");
189             return;
190         }
191     }
192     p1->next=p->next;
193     free(p);
194     printf("\nDeleted node %d ",loc+1);
195 }
196 void print()
197 {
198     struct node *p;
199     p=start;
200     if(p==NULL)
```

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(globals)

Project Classes Debug

single linked list.cpp

```
179     scanf("%d",&loc);
180     p=start;
181     for(i=0;i<loc;i++)
182     {
183         p1=p;
184         p=p->next;
185
186         if(p==NULL)
187         {
188             printf("\nCan't delete");
189             return;
190         }
191     }
192     p1->next=p->next;
193     free(p);
194     printf("\nDeleted node %d ",loc+1);
195 }
196 void print()
197 {
198     struct node *p;
199     p=start;
200     if(p==NULL)
201     {
202         printf("Nothing to print");
203     }
204     else
205     {
206         printf("\nprinting values:\n");
207         while (p!=NULL)
208         {
209             printf("\n%d",p->data);
210             p=p->next;
211         }
212     }
213 }
```

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Line: 1 Col: 1 Sel: 0 Lines: 213 Length: 4928 Insert Done parsing in 1.672 seconds

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Enter the operation to be performed:

- 1.Insert in the begining
  - 2.Insert at last
  - 3.Insert at any specified position
  - 4.Delete from Beginning
  - 5.Delete from last
  - 6.Delete node after specified location
  - 7.Show
  - 8.Exit
- 1

Enter value:

67

Enter the operation to be performed:

- 1.Insert in the begining
  - 2.Insert at last
  - 3.Insert at any specified position
  - 4.Delete from Beginning
  - 5.Delete from last
  - 6.Delete node after specified location
  - 7.Show
  - 8.Exit
- 1

Enter value:

45

Enter the operation to be performed:

- 1.Insert in the begining
  - 2.Insert at last
  - 3.Insert at any specified position
  - 4.Delete from Beginning
  - 5.Delete from last
  - 6.Delete node after specified location
  - 7.Show
  - 8.Exit
- 1

Enter value:



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Enter value:

90

Enter the operation to be performed:

- 1.Insert in the begining
  - 2.Insert at last
  - 3.Insert at any specified position
  - 4.Delete from Beginning
  - 5.Delete from last
  - 6.Delete node after specified location
  - 7.Show
  - 8.Exit
- 1

Enter value:

34

Enter the operation to be performed:

- 1.Insert in the begining
  - 2.Insert at last
  - 3.Insert at any specified position
  - 4.Delete from Beginning
  - 5.Delete from last
  - 6.Delete node after specified location
  - 7.Show
  - 8.Exit
- 2

Enter value:

45

Enter the operation to be performed:

- 1.Insert in the begining
- 2.Insert at last
- 3.Insert at any specified position
- 4.Delete from Beginning
- 5.Delete from last
- 6.Delete node after specified location
- 7.Show
- 8.Exit

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4.Delete from Beginning  
5.Delete from last  
6.Delete node after specified location  
7.Show  
8.Exit  
3

Enter element value:49

Enter the location after which you want to insert: 2

Enter the operation to be performed:

1.Insert in the begining  
2.Insert at last  
3.Insert at any specified position  
4.Delete from Beginning  
5.Delete from last  
6.Delete node after specified location  
7.Show  
8.Exit  
4

Enter the operation to be performed:

1.Insert in the begining  
2.Insert at last  
3.Insert at any specified position  
4.Delete from Beginning  
5.Delete from last  
6.Delete node after specified location  
7.Show  
8.Exit  
5

Enter the operation to be performed:

1.Insert in the begining  
2.Insert at last  
3.Insert at any specified position  
4.Delete from Beginning  
5.Delete from last  
6.Delete node after specified location  
7.Show

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5

Enter the operation to be performed:

- 1.Insert in the begining
- 2.Insert at last
- 3.Insert at any specified position
- 4.Delete from Beginning
- 5.Delete from last
- 6.Delete node after specified location
- 7.Show
- 8.Exit

6

Enter the location of the node after which you want to perform deletion:

4

Can't delete

Enter the operation to be performed:

- 1.Insert in the begining
- 2.Insert at last
- 3.Insert at any specified position
- 4.Delete from Beginning
- 5.Delete from last
- 6.Delete node after specified location
- 7.Show
- 8.Exit

7

printing values:

90

45

49

67

Enter the operation to be performed:

- 1.Insert in the begining
- 2.Insert at last
- 3.Insert at any specified position
- 4.Delete from Beginning
- 5.Delete from last
- 6.Delete node after specified location

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6

Enter the location of the node after which you want to perform deletion:

4

Can't delete

Enter the operation to be performed:

1.Insert in the begining

2.Insert at last

3.Insert at any specified position

4.Delete from Beginning

5.Delete from last

6.Delete node after specified location

7.Show

8.Exit

7

printing values:

90

45

49

67

Enter the operation to be performed:

1.Insert in the begining

2.Insert at last

3.Insert at any specified position

4.Delete from Beginning

5.Delete from last

6.Delete node after specified location

7.Show

8.Exit

8

-----

Process exited after 502.4 seconds with return value 0

Press any key to continue . . .