

C 7.c

X

rough > C 7.c > main()

185 insertAtEnd();
186 break;
187 case 4:
188 insertAtPosition();
189 break;
190 case 5:
191 deleteFirst();

PROBLEMS

OUTPUT

TERMINAL

DEBUG CONSOLE

Code

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```
PS D:\vs code> cd "d:\vs code\rough\" ; if ($?) { gcc 7.c -o 7 } ; if ($?) { .\7 }
```

```
1 Display  
2 Insert at beginning  
3 Insert at end  
4 For insertion at any position  
5 Delete from beginning  
6 Delete from end  
7 For deletion of element at any position  
8 To exit  
  
Enter Choice : 2  
  
Enter number to be inserted: 5  
  
1 Display  
2 Insert at beginning  
3 Insert at end  
4 For insertion at any position  
5 Delete from beginning  
6 Delete from end  
7 For deletion of element at any position  
8 To exit  
  
Enter Choice : 3  
  
Enter number to be inserted: 6  
  
1 Display  
2 Insert at beginning  
3 Insert at end  
4 For insertion at any position
```

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Spaces: 4

UTF-8

CRLF

c

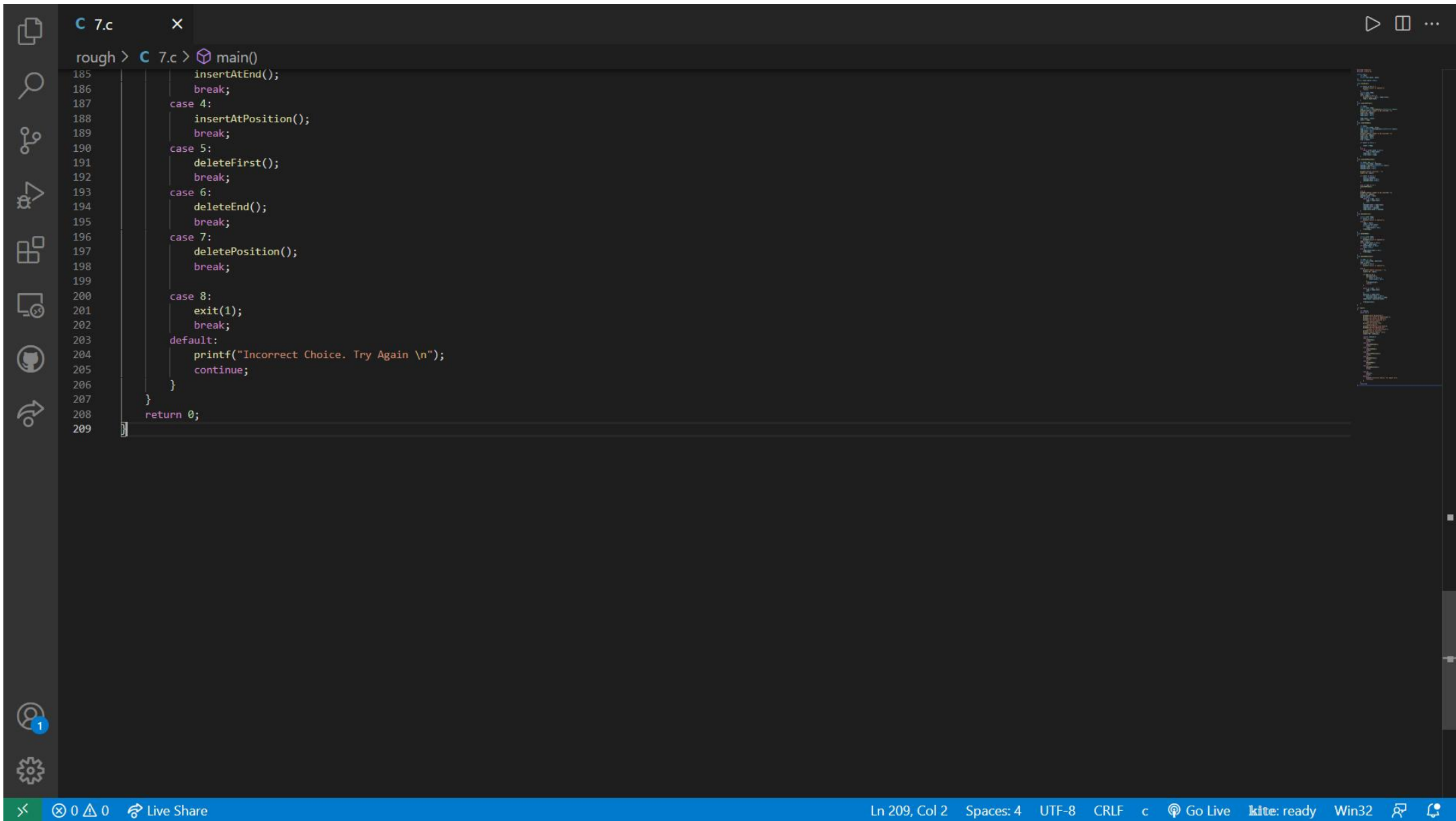
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Win32

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






C 7.c X

rough > C 7.c > main()

```
147     temp = temp->next;
148     i++;
149 }
150 position = temp->next;
151 if (position->next != NULL)
152     position->next->prev = temp;
153 temp->next = position->next;
154 free(position);
155 }
156 }
157
158 int main()
159 {
160     int choice;
161     while (1) {
162
163         printf("\n\t1 Display\n");
164         printf("\t2 Insert at beginning\n");
165         printf("\t3 Insert at end\n");
166         printf("\t4 For insertion at "
167             "any position\n");
168         printf("\t5 Delete from "
169             "beginning\n");
170         printf("\t6 Delete from end\n");
171         printf("\t7 For deletion of "
172             "element at any position\n");
173         printf("\t8 To exit\n");
174         printf("\nEnter Choice :\t");
175         scanf("%d", &choice);
176
177         switch (choice) {
178             case 1:
179                 traverse();
180                 break;
181             case 2:
182                 insertAtFront();
183                 break;
184             case 3:
185                 insertAtEnd();
186                 break;
187             case 4:
188                 insertAtPosition();
189                 break;
190             case 5:
191                 deleteFirst();
192                 break;
193             case 6:
194                 deleteEnd();
195             break;
```

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C 7.c X

rough > C 7.c > main()

```
98     struct node* temp;
99     if (start == NULL)
100         printf("\nList is empty\n");
101     else {
102         temp = start;
103         start = start->next;
104         if (start != NULL)
105             start->prev = NULL;
106         free(temp);
107     }
108 }
109 void deleteEnd()
110 {
111     struct node* temp;
112     if (start == NULL)
113         printf("\nList is empty\n");
114     temp = start;
115     while (temp->next != NULL)
116         temp = temp->next;
117     if (start->next == NULL)
118         start = NULL;
119     else {
120         temp->prev->next = NULL;
121         free(temp);
122     }
123 }
124 void deletePosition()
125 {
126     int pos, i = 1;
127     struct node *temp, *position;
128     temp = start;
129     if (start == NULL)
130         printf("\nList is empty\n");
131     else {
132         printf("\nEnter position : ");
133         scanf("%d", &pos);
134
135         if (pos == 1) {
136             deleteFirst();
137             if (start != NULL) {
138                 start->prev = NULL;
139             }
140             free(position);
141             return;
142         }
143
144         while (i < pos - 1) {
145             temp = temp->next;
```

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




```
rough > C 7.c > main()
```

```

1  #include <stdio.h>
2  #include <stdlib.h>
3
4  struct node {
5      int info;
6      struct node *prev, *next;
7  };
8  struct node* start = NULL;
9
10 void traverse()
11 {
12     if (start == NULL) {
13         printf("\nList is empty\n");
14         return;
15     }
16     struct node* temp;
17     temp = start;
18     while (temp != NULL) {
19         printf("Data = %d\n", temp->info);
20         temp = temp->next;
21     }
22 }
23 void insertAtFront()
24 {
25     int data;
26     struct node* temp;
27     temp = (struct node*)malloc(sizeof(struct node));
28     printf("\nEnter number to be inserted: ");
29     scanf("%d", &data);
30     temp->info = data;
31     temp->prev = NULL;
32
33     temp->next = start;
34     start = temp;
35 }
36 void insertAtEnd()
37 {
38     int data;
39     struct node *temp, *trav;
40     temp = (struct node*)malloc(sizeof(struct node));
41     temp->prev = NULL;
42     temp->next = NULL;
43     printf("\nEnter number to be inserted: ");
44     scanf("%d", &data);
45     temp->info = data;
46     temp->next = NULL;
47     trav = start;
48
49     if (start == NULL) {

```





C 7.c

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185

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insertAtEnd();

break;

case 4:

insertAtPosition();

break;

case 5:

deleteFirst();

PROBLEMS

OUTPUT

TERMINAL

DEBUG CONSOLE

Code

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6 Delete from end

7 For deletion of element at any position

8 To exit

Enter Choice : 7

Enter position :

1

1 Display

2 Insert at beginning

3 Insert at end

4 For insertion at any position

5 Delete from beginning

6 Delete from end

7 For deletion of element at any position

8 To exit

Enter Choice : 1

Data = 6

1 Display

2 Insert at beginning

3 Insert at end

4 For insertion at any position

5 Delete from beginning

6 Delete from end

7 For deletion of element at any position

8 To exit

Enter Choice : 8

PS D:\vs code\rough>

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Spaces: 4

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c

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