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```

ds-10.c > delete_pos(int, NODE)
{
    temp = temp->link;
    temp->link = first;
    first = temp;
    return first;
}
NODE delete_front(NODE first)
{
    NODE temp;
    if (first == NULL)
    {
        printf("list is empty cannot delete\n");
        return first;
    }
    temp = first;
    temp = temp->link;
    printf("item deleted at front-end is=%d\n", first->info);
    free(first);
    return temp;
}
NODE insert_rear(NODE first, int item)
{
    NODE temp, cur;
    temp = getnode();
    temp->info = item;
    temp->link = NULL;
    if (first == NULL)
        return temp;
    cur = first;
    while (cur->link != NULL)
        cur = cur->link;
    cur->link = temp;
    return first;
}

```

ds-10.c > delete_pos(int, NODE)

```
64 }
65 NODE delete_rear(NODE first)
66 {
67     NODE cur, prev;
68     if (first == NULL)
69     {
70         printf("list is empty cannot delete\n");
71         return first;
72     }
73     if (first->link == NULL)
74     {
75         printf("item deleted is %d\n", first->info);
76         free(first);
77         return NULL;
78     }
79     prev = NULL;
80     cur = first;
81     while (cur->link != NULL)
82     {
83         prev = cur;
84         cur = cur->link;
85     }
86     printf("item deleted at rear-end is %d", cur->info);
87     free(cur);
88     prev->link = NULL;
89     return first;
90 }
91
92 NODE insert_pos(int item, int pos, NODE first)
93 {
94     NODE temp;
95     NODE prev, cur;
96     int count;
```

ds-10.c > delete_pos(int, NODE)

```
93 {
94     NODE temp;
95     NODE prev, cur;
96     int count;
97     temp = getnode();
98     temp->info = item;
99     temp->link = NULL;
100     if (first == NULL && pos == 1)
101         return temp;
102     if (first == NULL)
103     {
104         printf("invalid pos\n");
105         return first;
106     }
107     if (pos == 1)
108     {
109         temp->link = first;
110         return temp;
111     }
112     count = 1;
113     prev = NULL;
114     cur = first;
115     while (cur != NULL && count != pos)
116     {
117         prev = cur;
118         cur = cur->link;
119         count++;
120     }
121     if (count == pos)
122     {
123         prev->link = temp;
124         temp->link = cur;
125         return first;
126     }
```

```
93 void delete_pos(int pos)
94 {
95     if (pos < 1)
96     {
97         printf("Invalid position\n");
98         return;
99     }
100     if (pos == 1)
101     {
102         if (first == NULL)
103             return;
104         first = first->link;
105         return;
106     }
107     if (pos == 0)
108     {
109         printf("Invalid position\n");
110         return;
111     }
112     NODE temp = getnode();
113     temp->info = item;
114     temp->link = NULL;
115     if (first == NULL)
116     {
117         printf("Invalid position\n");
118         return;
119     }
120     if (pos == 1)
121     {
122         temp->link = first;
123         return;
124     }
125     NODE prev = NULL;
126     NODE cur = first;
127     int count = 1;
128     while (cur != NULL && count != pos)
129     {
130         prev = cur;
131         cur = cur->link;
132         count++;
133     }
134     if (count == pos)
135     {
136         prev->link = temp;
137         temp->link = cur;
138         return;
139     }
140     printf("Invalid position\n");
141 }
```

```

ds-10.c > delete_pos(int, NODE)
125     return first;
126 }
127 printf("IP\n");
128 return first;
129 }
130
131 NODE delete_pos(int pos, NODE first)
132 {
133     NODE prev, cur;
134     int count;
135     if (first == NULL || pos <= 0)
136     {
137         printf("Invalid position\n");
138         return NULL;
139     }
140     if (pos == 1)
141     {
142         cur = first;
143         first = first->link;
144         printf("iten deleted is %d", cur->info);
145         freenode(cur);
146         return first;
147     }
148     prev = NULL;
149     cur = first;
150     count = 1;
151     while (cur != NULL)
152     {
153         if (count == pos)
154         {
155             break;
156         }

```

ds-10.c > delete_pos(int, NODE)

```
156     }
157     prev = cur;
158     cur = cur->link;
159     count++;
160 }
161 if (count != pos)
162 {
163     printf("Invalid position\n");
164     return first;
165 }
166 prev->link = cur->link;
167 printf("item deleted is %d", cur->info);
168 freenode(cur);
169 return first;
170 }
171 void display(NODE first)
172 {
173     NODE temp;
174     if (first == NULL)
175         printf("list empty cannot display items\n");
176     for (temp = first; temp != NULL; temp = temp->link)
177     {
178         printf("%d\n", temp->info);
179     }
180 }
181 void main()
182 {
183     int item, choice, pos;
184     NODE first = NULL;
185
186     for (;;)
187     {
188         printf("\n 1:Insert front\n 2:Delete front\n 3:Insert rear\n 4:Delete rear\n 5:insert pos\n 6:delete pos\n
```


ds-10.c > delete_pos(int, NODE)

```
183     int item, choice, pos;
184     NODE first = NULL;
185
186     for (;;)
187     {
188         printf("\n 1:Insert_front\n 2:Delete_front\n 3:Insert_rear\n 4:Delete_rear\n 5:insert_pos\n 6:delete_pos\n
189         7:display_list\ndefault:Exit\n");
190         printf("enter the choice\n");
191         scanf("%d", &choice);
192         switch (choice)
193         {
194             case 1:
195                 printf("enter the item at front-end\n");
196                 scanf("%d", &item);
197                 first = insert_front(first, item);
198                 break;
199             case 2:
200                 first = delete_front(first);
201                 break;
202             case 3:
203                 printf("enter the item at rear-end\n");
204                 scanf("%d", &item);
205                 first = insert_rear(first, item);
206                 break;
207             case 4:
208                 first = delete_rear(first);
209                 break;
210             case 5:
211                 printf("enter the position and item:\n");
212                 scanf("%d", &pos);
213                 scanf("%d", &item);
```

ds-10.c > delete_pos(int, NODE)

```
200     break;
201 case 3:
202     printf("enter the item at rear-end\n");
203     scanf("%d", &item);
204     first = insert_rear(first, item);
205     break;
206 case 4:
207     first = delete_rear(first);
208     break;
209
210 case 5:
211     printf("enter the position and item:\n");
212     scanf("%d", &pos);
213     scanf("%d", &item);
214     first = insert_pos(item, pos, first);
215     break;
216
217 case 6:
218     printf("Enter the position:\n");
219     scanf("%d", &pos);
220     first = delete_pos(pos, first);
221     break;
222 case 7:
223     display(first);
224     break;
225 default:
226     exit(0);
227     break;
228 }
229 }
230 }
```


+ ~~~~~

+ CategoryInfo : ResourceUnavailable: (C:\Users\niranj...c\posh-git.ps1:String) [Import-Module], FileNotFoundException
+ FullyQualifiedErrorId : Modules_ModuleNotFound,Microsoft.PowerShell.Commands.ImportModuleCommand

Loading personal and system profiles took 1733ms.

PS C:\Users\niranjana savanur\Documents\ds lab> cd "c:\Users\niranjana savanur\Documents\ds lab"

PS C:\Users\niranjana savanur\Documents\ds lab> .\"ds-10.exe"

1:Insert_front

2:Delete_front

3:Insert_rear

4:Delete_rear

5:insert_pos

6:delete_pos

7:display_list

default:Exit

enter the choice

1

enter the item at front-end

3

1:Insert_front

2:Delete_front

3:Insert_rear

4:Delete_rear

5:insert_pos

6:delete_pos

7:display_list

default:Exit

enter the choice

1

enter the item at front-end

4

1:Insert_front

2:Delete_front

3:Insert_rear

```
2:Delete_front
3:Insert_rear
4:Delete_rear
5:insert_pos
6:delete_pos
7:display_list
default:Exit
enter the choice
3
enter the item at rear-end
2
```

```
1:Insert_front
2:Delete_front
3:Insert_rear
4:Delete_rear
5:insert_pos
6:delete_pos
7:display_list
default:Exit
enter the choice
3
enter the item at rear-end
1
```

```
1:Insert_front
2:Delete_front
3:Insert_rear
4:Delete_rear
5:insert_pos
6:delete_pos
7:display_list
default:Exit
enter the choice
7
4
3
```

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

1: C/C++ Compile Run



3
2
1

1:Insert_front
2:Delete_front
3:Insert_rear
4:Delete_rear
5:insert_pos
6:delete_pos
7:display_list
default:Exit

enter the choice

2

item deleted at front-end is=4

1:Insert_front
2:Delete_front
3:Insert_rear
4:Delete_rear
5:insert_pos
6:delete_pos
7:display_list
default:Exit

enter the choice

4

item deleted at rear-end is 1

1:Insert_front
2:Delete_front
3:Insert_rear
4:Delete_rear
5:insert_pos
6:delete_pos
7:display_list
default:Exit

enter the choice

7

enter the choice

7

3

2

1:Insert_front

2:Delete_front

3:Insert_rear

4:Delete_rear

5:insert_pos

6:delete_pos

7:display_list

default:Exit

enter the choice

1

enter the item at front-end

4

1:Insert_front

2:Delete_front

3:Insert_rear

4:Delete_rear

5:insert_pos

6:delete_pos

7:display_list

default:Exit

enter the choice

1

enter the item at front-end

5

1:Insert_front

2:Delete_front

3:Insert_rear

4:Delete_rear

5:insert_pos

6:delete_pos

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

1: C/C++ Compile Run



```
5:insert_pos
6:delete_pos
7:display_list
default:Exit
enter the choice
7
5
4
3
2

1:Insert_front
2:Delete_front
3:Insert_rear
4:Delete_rear
5:insert_pos
6:delete_pos
7:display_list
default:Exit
enter the choice
6
Enter the position:
3
item deleted is 3
1:Insert_front
2:Delete_front
3:Insert_rear
4:Delete_rear
5:insert_pos
6:delete_pos
7:display_list
default:Exit
enter the choice
7
5
4
2
```


TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

1: C/C++ Compile Run



```
2:Delete_front
3:Insert_rear
4:Delete_rear
5:insert_pos
6:delete_pos
7:display_list
default:Exit
enter the choice
6
Enter the position:
3
item deleted is 3
1:Insert_front
2:Delete_front
3:Insert_rear
4:Delete_rear
5:insert_pos
6:delete_pos
7:display_list
default:Exit
enter the choice
7
5
4
2

1:Insert_front
2:Delete_front
3:Insert_rear
4:Delete_rear
5:insert_pos
6:delete_pos
7:display_list
default:Exit
enter the choice
8
PS C:\Users\niranjana savanur\Documents\ds lab>
```