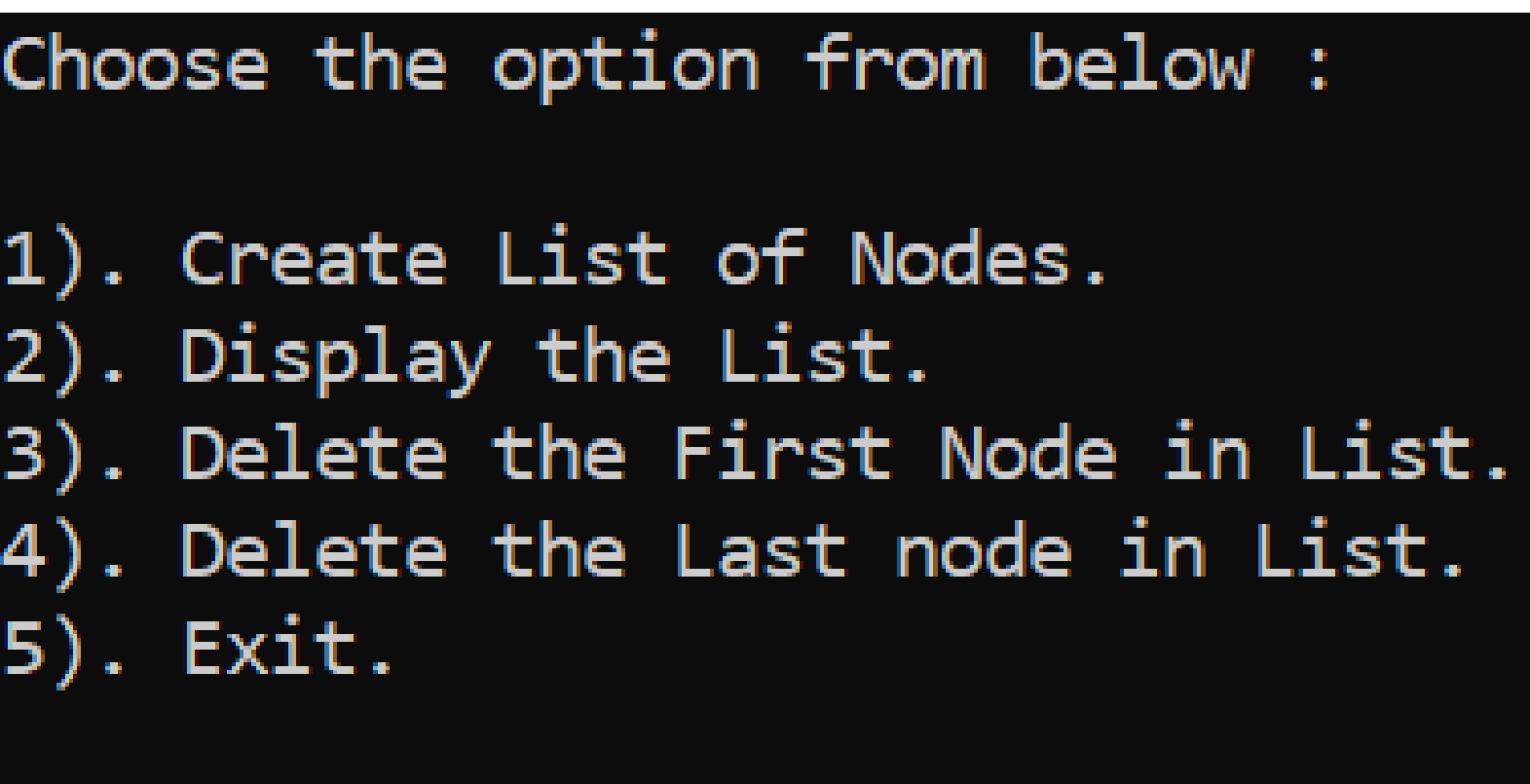
```cpp
#include<iostream>
using namespace std;
struct SingleLinkList
{
    int data;
    struct SingleLinkList* next;
};
typedef struct SingleLinkList node;
node* getNode()
{
    node* newnode=(node*)malloc(sizeof(node));
    newnode=newnode;
    cout<<"Enter the Data in the Node = ";
    cin>>newnode->data;
    cout<<"\n*********\n";
    newnode->next=NULL;
    return newnode;
}
node* createList(node* &start)
{
    int n;
    cout<<"Enter number of list you want = ";
    cin>>n;
  for(int i=0;i<n;i++)
  {
    cout<<"\n\n";
    node* newNode=getNode();
    if(start==NULL)
    {
        start=newNode;
    }
    else
    {
        node* temp;
        temp=start;
        while(temp->next!=NULL)
        {
```

```
36          while(temp->next!=NULL)
37          {
38              temp=temp->next;
39          }
40          temp->next=newNode;
41      }
42    }
43    cout<<"\n\n\n";
44    return start;
45  }
46  void display(node* ptr)
47  {
48      int counter=0;
49      cout<<"Traversal of Linked List : \n";
50      if(ptr==NULL)
51      {
52          cout<<"\n\nThere is nothing to traverse in the List.";
53      }
54      else
55      {
56      while(ptr!=NULL)
57      {
58      cout<<"\n*\n"<<ptr->data<<endl;
59      ptr=ptr->next;
60      counter++;
61      }
62      }
63      cout<<"\n\n\nTotal Nodes in the List = "<<counter<<"\n\n\n";
64  }
65  node* delAtBeg(node* &start)
66  {
67      if(start==NULL)
68      {
```

```
67      if(start==NULL)
68      {
69          cout<<"There is no Node in the List to Delete.\n";
70      }
71      else
72      {
73          cout<<"\nFirst Node in the List has been Deleted: "<<start->data<<endl<<endl;
74          node* temp;
75          temp=start;
76          start=start->next;
77          free(temp);
78      }
79      return start;
80  }
81  node* delAtEnd(node* &start)
82  {
83      if(start==NULL)
84      {
85          cout<<"There is no node in the List to Delete.\n\n\n\n";
86      }
87      else if(start->next==NULL)
88      {
89          cout<<"\nSecond Node in the List has been Deleted: "<<start->data<<endl<<endl;
90          cout<<"Empty List now\n\n\n";
91          free(start->next);
92          start=NULL;
93      }
94      else
95      {
96          node* temp=start;
97          node* prev=temp;
98          while(temp->next!=NULL)
99          {
100             prev=temp;
101             temp=temp->next;
102         }
```

```
103         cout<<"\nSecond Node in the List has been Deleted: "<<temp->data<<endl<<endl;
104         prev->next=NULL;
105         free(temp);
106     }
107     return start;
108 }
109 int main()
110 {
111     node* start=NULL;
112     int opt;
113     int upd=0;
114     options:
115     cout<<"Choose the option from below :\n\n1). ";
116     if(upd==1)
117     {
118         cout<<"Add Nodes in the List";
119     }
120     else
121     {
122         cout<<"Create List of Nodes";
123     }
124     cout<<".\n2). Display the List.\n3). Delete the First Node in List.\n4). Delete the Last node in List.\n5). Exit.\n\n";
125     cin>>opt;
126     if(opt<1 || opt>5)
127     {
128         system("cls");
129         cout<<"\nInvalid Option!\n\n Choose Again.....\n\n";
130         goto options;
131     }
132     else if(opt==1)
133     {
134        system("cls");
135        createList(start);
136        upd=1;
```

```
136         upd=1;
137         goto options;
138     }
139     else if(opt==2)
140     {
141         system("cls");
142         display(start);
143         goto options;
144     }
145     else if(opt==3)
146     {
147         system("cls");
148         delAtBeg(start);
149         if(start==NULL)
150         {
151             upd=0;
152         }
153         goto options;
154     }
155     if(opt==4)
156     {
157         system("cls");
158         delAtEnd(start);
159         if(start==NULL)
160         {
161             upd=0;
162         }
163         goto options;
164     }
165     if(opt==5)
166     {
167         system("cls");
168         cout<<"\n\n\n\t\t\tThank You! \n\n\n\n\nProgram Finished....";
169     }
170     system("pause");
171 }
```


Choose the option from below :
1). Create List of Nodes.
2). Display the List.
3). Delete the First Node in List.
4). Delete the Last node in List.
5). Exit.

```
Enter number of list you want = 5

Enter the Data in the Node = 12

*********

Enter the Data in the Node = 34

*********

Enter the Data in the Node = 56

*********

Enter the Data in the Node = 78

*********

Enter the Data in the Node = 90

*********



Choose the option from below :

1). Add Nodes in the List.
2). Display the List.
3). Delete the First Node in List.
4). Delete the Last node in List.
5). Exit.
```

```
Traversal of Linked List :

*
12

*
34

*
56

*
78

*
90



Total Nodes in the List = 5


Choose the option from below :

1). Add Nodes in the List.
2). Display the List.
3). Delete the First Node in List.
4). Delete the Last node in List.
5). Exit.
```

```
First Node in the List has been Deleted: 12

Choose the option from below :

1). Add Nodes in the List.
2). Display the List.
3). Delete the First Node in List.
4). Delete the Last node in List.
5). Exit.
```

```
Last Node in the List has been Deleted: 90

Choose the option from below :

1). Add Nodes in the List.
2). Display the List.
3). Delete the First Node in List.
4). Delete the Last node in List.
5). Exit.

5
```

```
                    Thank You!


Program Finished....

Press any key to continue . . .
```