1. Write a program in C to create and display a doubly linked list.
Test Data :
Input the number of nodes : 3
Input data for node 1 : 2
Input data for node 2 : 5
Input data for node 3 : 8
Expected Output :
Data entered on the list are :
node 1 : 2
node 2 : 5
node 3 : 8

2. Write a program in C to create a doubly linked list and display it in reverse order.
Test Data :
Input the number of nodes : 3
Input data for node 1 : 2
Input data for node 2 : 5
Input data for node 3 : 8
Expected Output :
Data in reverse order are :
Data in node 1 : 8
Data in node 2 : 5
Data in node 3 : 2

3. Write a program in C to insert a node at the beginning of a doubly linked list.
Test Data and Expected Output :
Input the number of nodes : 3
Input data for node 1 : 2
Input data for node 2 : 5
Input data for node 3 : 8

Data entered in the list are :
node 1 : 2
node 2 : 5
node 3 : 8
Input data for the first node : 1

After insertion the new list are :
node 1 : 1
node 2 : 2
node 3 : 5
node 4 : 8

4. Write a program in C to insert a new node at the end of a doubly linked list.
Test Data and Expected Output :
Input the number of nodes : 3
Input data for node 1 : 2
Input data for node 2 : 5
Input data for node 3 : 8

Data entered in the list are :
node 1 : 2
node 2 : 5
node 3 : 8
Input data for the last node : 9

After insertion the new list are :
node 1 : 2
node 2 : 5
node 3 : 8
node 4 : 9

5. Write a program in C to insert a new node at any position in a doubly linked list.
Test Data and Expected Output :
Input the number of nodes (3 or more): 3
Input data for node 1 : 2
Input data for node 2 : 4
Input data for node 3 : 5

Data entered in the list are :
node 1 : 2
node 2 : 4
node 3 : 5
Input the position (2 to 2) to insert a new node :
2
Input data for the position 2 : 3

After insertion the new list are :
node 1 : 2
node 2 : 3
node 3 : 4
node 4 : 5

6. Write a program in C to insert a new node in the middle of a doubly linked list.
Test Data and Expected Output :

Doubly Linked List : Insert new node at the middle in a doubly linked list :

```
Input the number of nodes (3 or more ): 3
Input data for node 1 : 2
Input data for node 2 : 4
Input data for node 3 : 5

Data entered in the list are :
node 1 : 2
node 2 : 4
node 3 : 5
Input the position ( 2 to 2 ) to insert a new node :
2
Input data for the position 2 : 3

After insertion the new list are :
node 1 : 2
node 2 : 3
node 3 : 4
node 4 : 5
```

7. Write a program in C to delete a node from the beginning of a doubly linked list.

Test Data and Expected Output :

```
Input the number of nodes (3 or more ): 3
Input data for node 1 : 1
Input data for node 2 : 2
Input data for node 3 : 3

Data entered in the list are :
node 1 : 1
node 2 : 2
node 3 : 3

After deletion the new list are :
node 1 : 2
node 2 : 3
```

8. Write a program in C to delete a node from the last node of a doubly linked list.

Test Data and Expected Output :

```
Input the number of nodes (3 or more ): 3
Input data for node 1 : 1
Input data for node 2 : 2
Input data for node 3 : 3
```

Data entered in the list are :
node 1 : 1
node 2 : 2
node 3 : 3

After deletion the new list are :
node 1 : 1
node 2 : 2

9. Write a program in C to delete a node from any position in a doubly linked list.
Test Data and Expected Output :
Doubly Linked List : Delete node from any position of a doubly linked list
:

Input the number of nodes (3 or more): 3
Input data for node 1 : 1
Input data for node 2 : 2
Input data for node 3 : 3

Data entered in the list are :
node 1 : 1
node 2 : 2
node 3 : 3
Input the position (1 to 3) to delete a node : 3

After deletion the new list are :
node 1 : 1
node 2 : 2

10. Write a program in C to delete a node from the middle of a doubly linked list.
Test Data and Expected Output :
Input the number of nodes (3 or more): 3
Input data for node 1 : 1
Input data for node 2 : 2
Input data for node 3 : 3

Data entered in the list are :
node 1 : 1
node 2 : 2
node 3 : 3
Input the position (1 to 3) to delete a node : 2

After deletion the new list are :

node 1 : 1
node 2 : 3

11. Write a program in C to find the maximum value in a doubly linked list.
Test Data :
Input the number of nodes : 3
Input data for node 1 : 5
Input data for node 2 : 9
Input data for node 3 : 1
Expected Output :
Data entered in the list are :
node 1 : 5
node 2 : 9
node 3 : 1

The Maximum Value in the Linked List : 9

12. Write a C program to convert a Doubly Linked list into a string.
Test Data and Expected Output :
Input the number of nodes: 4
Input data for node 1 : 10
Input data for node 2 : 11
Input data for node 3 : 12
Input data for node 4 : 13

The doubly linked list in string format: 10 11 12 13