LAB -10 Marks - 10

Question:

Create a priority queue using a linked list in C++. The priority queue should support the following operations:

- Insertion of elements with a given priority.
- Deletion of the highest priority element.
- Printing the elements of the priority queue along with their priorities.

In the `main` function, create a menu-driven program that allows the user to choose from the following options:

1. Insert an element.
2. Delete the highest priority element.
3. Print the elements of the priority queue.
4. Exit the program.

Note: The priority of each data element is unique.

Sample Input Output:

Menu:
1. Insert an element
2. Delete the highest priority element
3. Print the elements of the priority queue
4. Exit
Enter your choice: 1
Enter data: 10
Enter priority: 2

Menu:
1. Insert an element
2. Delete the highest priority element
3. Print the elements of the priority queue
4. Exit
Enter your choice: 1
Enter data: 20
Enter priority: 1

Menu:
1. Insert an element
2. Delete the highest priority element
3. Print the elements of the priority queue
4. Exit
Enter your choice: 1
Enter data: 30
Enter priority: 3

Menu:
1. Insert an element
2. Delete the highest priority element
3. Print the elements of the priority queue
4. Exit
Enter your choice: 3

Data: 30,Priority: 3 Data: 10, Priority: 2 Data: 20, Priority: 1

Menu:
1. Insert an element
2. Delete the highest priority element
3. Print the elements of the priority queue
4. Exit
Enter your choice: 2

Menu:
1. Insert an element
2. Delete the highest priority element
3. Print the elements of the priority queue
4. Exit
Enter your choice: 3

Data: 10, Priority: 2 Data: 20, Priority: 1

Menu:
1. Insert an element
2. Delete the highest priority element
3. Print the elements of the priority queue
4. Exit
Enter your choice: 4
Exiting...