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Class:- DSA

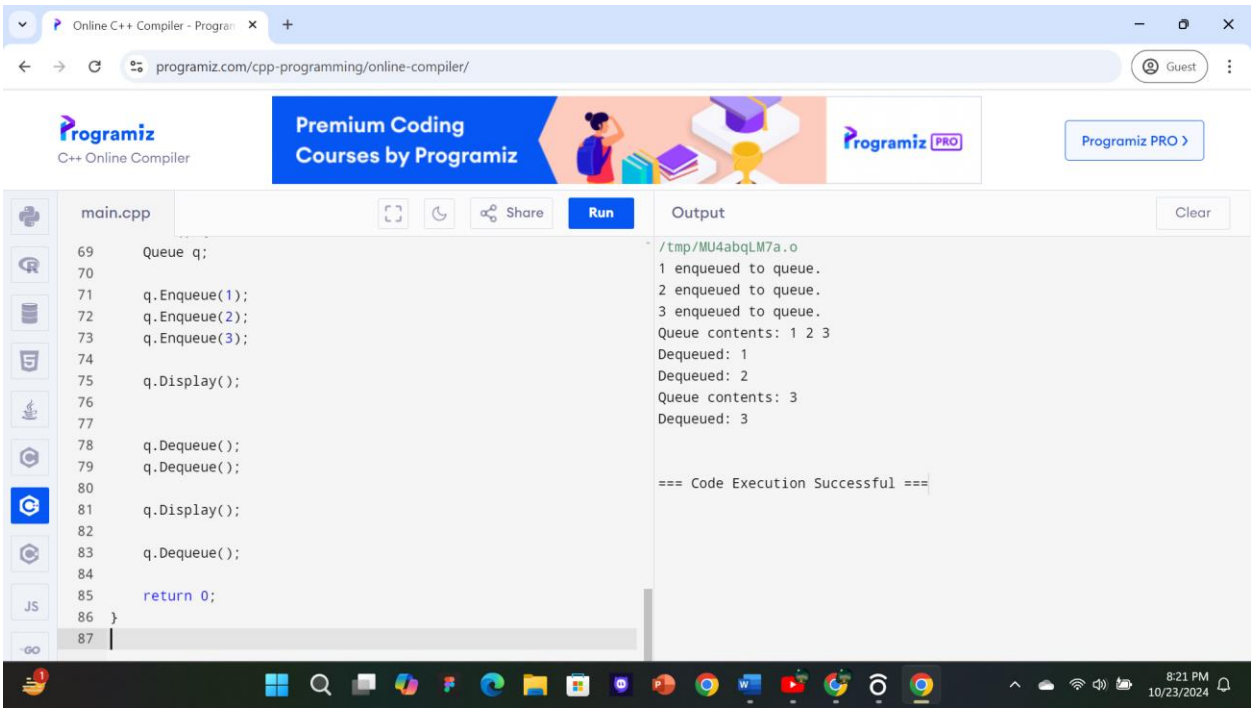
```
#include <iostream>
using namespace std;

struct Node {
    int data;
    Node* next;
};

class Queue {
    Node* front;
    Node* rear;

public:
    Queue() {
        front = rear = NULL;
    }
```

```
void Enqueue(int data) {
    Node* newNode = new Node;
    newNode->data = data;
    newNode->next = NULL;

    if (rear == NULL) {

        front = rear = newNode;
    } else {
        rear->next = newNode;
        rear = newNode;
    }
    cout << data << " enqueued to queue." << endl;
}

void Dequeue() {
    if (front == NULL) {
        cout << "Queue Underflow!" << endl;
        return;
    }
```

```
    Node* temp = front;
    front = front->next;

    if (front == NULL) {
        rear = NULL;
    }

    cout << "Dequeued: " << temp->data << endl;
    delete temp;
}

void Display() {
    if (front == NULL) {
        cout << "Queue is empty." << endl;
        return;
    }

    Node* temp = front;
    cout << "Queue contents: ";
    while (temp != NULL) {
        cout << temp->data << " ";
        temp = temp->next;
```

```
        }
        cout << endl;
    }
};

int main() {
    Queue q;

    q.Enqueue(1);
    q.Enqueue(2);
    q.Enqueue(3);

    q.Display();



    q.Dequeue();
    q.Dequeue();

    q.Display();

    q.Dequeue();
```

```
    return 0;
}
```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main.cpp
Share
Run
Output
Clear
69 Queue q;
70
71 q.Enqueue(1);
72 q.Enqueue(2);
73 q.Enqueue(3);
74
75 q.Display();
76
77
78 q.Dequeue();
79 q.Dequeue();
80
81 q.Display();
82
83 q.Dequeue();
84
85 return 0;
86 }
87
/tmp/MU4abqLM7a.o
1 enqueued to queue.
2 enqueued to queue.
3 enqueued to queue.
Queue contents: 1 2 3
Dequeued: 1
Dequeued: 2
Queue contents: 3
Dequeued: 3
=== Code Execution Successful ===
8:21 PM
10/23/2024