Lab Assignment 3

Implement circular queue using Array. Perform following operations on it a) Insertion(Enqueue) ,b)Deletion(Dequeue), c) Display

Code

```
// Program to insert, delete and print the elements of Linear queue using array.
#include<iostream>
using namespace std;
class queue
{
	private:
	int rear,front;
	int queueL[50];
	int max;
	int size;
	public:
		queue()
```

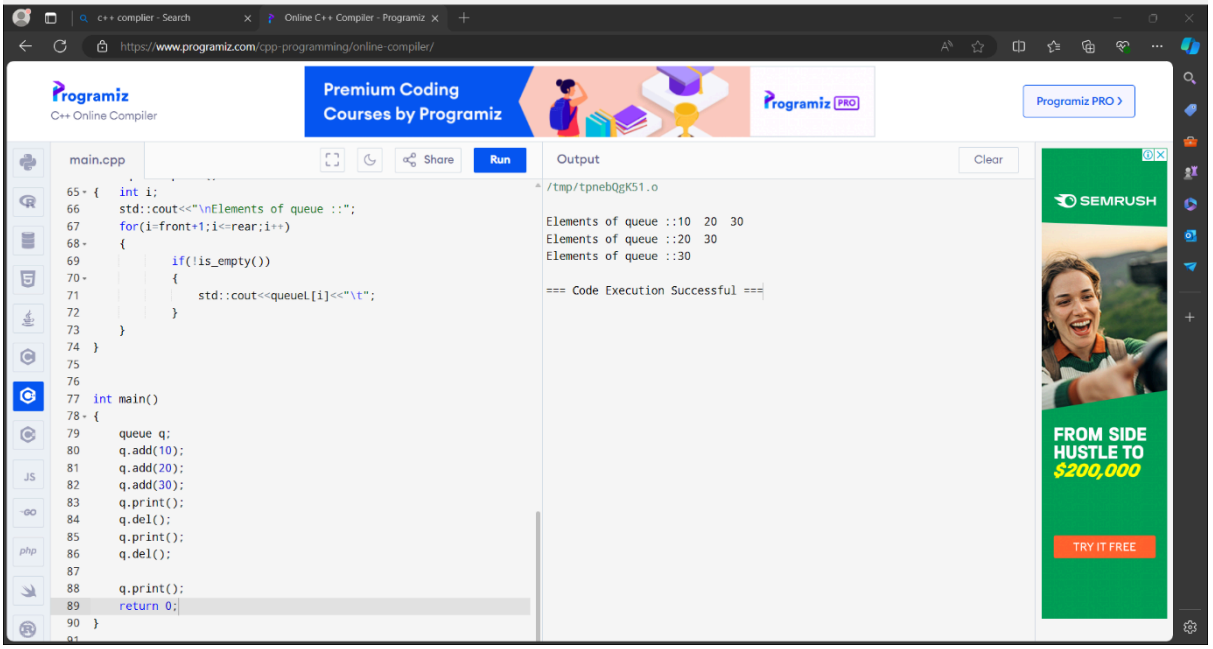
```
        {
            size=0;
            max=50;
            rear=front=-1;   //Initially queue is
empty
        }
        int is_empty();
        int is_full();
        void add(int element);
        void del();
        void print();

};


int queue::is_empty()
{
    if(front==rear)   //Underflow condition of Queue
    {
        return 1;
    }
```

```
    else
        return 0;
}
int queue::is_full()
{
    if(rear==(max-1))     //Overflow condition of
queue
    {
        return 1;
    }
    else
        return 0;
}
void queue::add(int element)      //insertion of an
element
{
    if(!is_full())
    {
        queueL[++rear]=element;
        size++;
    }
```

```
}
void queue::del()                    //Deletion of an
element
{
      if(!is_empty())
      {
            int element;
            size--;
            element=queueL[++front];
      }

}
void queue::print()
{   int i;
      std::cout<<"\nElements of queue ::";
      for(i=front+1;i<=rear;i++)
      {
                  if(!is_empty())
                  {
                        std::cout<<queueL[i]<<"\t";
```

```
                }
        }
}


int main()
{
        queue q;
        q.add(10);
        q.add(20);
        q.add(30);
        q.print();
        q.del();
        q.print();
        q.del();

        q.print();
return 0;
}
```

Output


Programiz
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Programiz PRO ›
main.cpp
Share
Run
Output
Clear
/tmp/tpnebQgK51.o
Elements of queue ::10 20 30
Elements of queue ::20 30
Elements of queue ::30
=== Code Execution Successful ===
SEMRUSH
FROM SIDE HUSTLE TO $200,000
TRY IT FREE