```
#include<iostream>
#include<stdlib.h>
#include<conio.h>
using namespace std;
template<class T>class CQueue
{
   T *items;
   int front,rear,size;
public:
   CQueue(int len)
   {
      items=new T[len];
      front=rear=-1;
      size=len;
   }
   bool isempty()
   {
      return( front==-1 );
```

```
}
bool isFull()
{
    return((rear+1)%size==front);
}
void enqueue(T val)
{
    if(isFull())
        cout<<"Queue Overflow ";
    else
       {
        rear=(rear+1)%size;
        items[rear]=val;
        if(front==-1)
            front=0;
    }
}
T dequeue()
```

```
{
    if(isempty())
    {
        cout<<"Underflow Condition ";
        return -1;
    }
    else
      {
        T v=items[front];
        if(front!=rear)
            front=(front+1)%size;
        else
                    rear=front=-1;
        return v;
    }
}
void Clear()
{
```

```
    front=rear=-1;
}
void Display()
{
    if(isempty())
        cout<<"Queue Empty ";
    else
       {
        cout<<"Queue : ";
        int index=front;
        while(index!=rear)
        {
            cout<<items[index]<<"  ";
            index=(index+1)%size;
        }
        cout<<items[rear]<<"  ";
    }
}
```

```
void menu()
{
    cout<<"MENU";
    cout<<"\n1.enqueue. ";
    cout<<"\n2.dequue. ";
    cout<<"\n3.Display. ";
    cout<<"\n4.Clear. ";
    cout<<"\n5.Exit. ";
    choice();
}
void choice()
{
    T val,r;
    int ch;
    char c='Y';
    cout<<"\nEnter your choice : ";
    cin>>ch;
    switch(ch)
```

```
        {
            case 1: cout<<"Enter data : ";
                cin>>val;
                enqueue(val);
                break;
            case 2: r=dequeue();
                cout<<"Value Deleted : "<<r;
                break;
            case 3: Display();
                break;
            case 4: Clear();
                break;
            case 5: exit(0);
            default: cout<<"Wrong input!! ";
        }
        cout<<"\nDo you want to
continue(Y/N) : ";
        cin>>c;
```

```
        if(c=='Y' || c=='y')
            choice();
        else
                cout<<"Press any key to exit ";
    }
};
int main()
{
    int size;
    cout<<"Enter the size of Queue : ";
    cin>>size;
    CQueue<int> Q(size);
    CQueue<float> Q2(size);
    Q.menu();
    Q2.menu();
    getch();
    return 0;
}
```