

```
#include<iostream>
```

```
#include<stdlib.h>
```

```
using namespace std;
```

```
-----  
-----  
template <class T> class QueueADT  
{  
    int size, front, rear;  
    T queue[10];  
    public:  
        QueueADT(int s);  
        int isFull();  
        int isEmpty();  
        void Insert(T data);  
        T Delete();  
};  
-----
```

```
-----  
template <class T> QueueADT <T> :: QueueADT(int s)  
{  
    size=s;  
    front=rear=0;  
}  
-----
```

```
-----  
template <class T> int QueueADT <T> :: isFull()  
{  
    if (rear==size)  
        return 1;  
    else  
        return 0;  
}  
-----
```

```
-----  
template <class T> int QueueADT <T> :: isEmpty()  
{  
    if (front==rear)  
        return 1;  
    else  
        return 0;  
}  
-----
```

```
template <class T> void QueueADT <T> :: Insert(T data)
{
    if(isFull())
    {
        cout << ".....Queue FULL..!! MSG from Insert(T data)";
        return;
    }
    else
    {
        rear=rear+1;
        queue[rear]=data;
    }
}
```

```
template <class T> T QueueADT <T> :: Delete()
{
    T ddata=-1;

    if(isEmpty())
    {
        cout << ".....Queue EMPTY..!! MSG from Delete()";
    }

    else
    {
        front=front+1;
        ddata=queue[front];
    }
    return(ddata);
}
```

```
main()
```

```
{
```

```
    int ch;
    int t;
    int y;
```

```
    QueueADT <int> que(5);
```

```
    do
    {
```

```
        cout << "\n 1.Insert \n 2.Delete \n 3.Exit \n Enter Choice ? ";
        cin >> ch;
```

```
        switch(ch)
        {
```

```
            case 1:
```

```
                cout << "Enter Data ? ";
                cin >> y;
```

```
                que.Insert(y);
                break;
```

```
            case 2:
```

```
                t=que.Delete();
```

```
                if(t!=-1)
```

```
                    cout << "Deleted Data = " << t;
```

```
                break;
```

```
            case 3:
```

```
                exit(0);
```

```
        }
```

```
    } while (ch!=3);
```

```
    return (0);
```

```
}
```
