**Practical No.11**

**#include <iostream>**

**#define MAX 10**

**Using namespace std;**

**Struct queue**

**{ int data[MAX];**

**Int front,rear;**

**};**

**Class Queue**

**{ struct queue q;**

**Public:**

**Queue(){q.front=q.rear=-1;}**

**Int isempty();**

**Int isfull();**

**Void enqueue(int);**

**Int delqueue();**

**Void display();**

**};**

**Int Queue::isempty()**

**{**

**Return(q.front==q.rear)?1:0;**

**}**

**Int Queue::isfull()**

**{ return(q.rear==MAX-1)?1:0;}**

**Void Queue::enqueue(int x)**

**{q.data[++q.rear]=x;}**

**Int Queue::delqueue()**

**{return q.data[++q.front];}**

**Void Queue::display()**

**{ int I;**

**Cout<<”\n”;**

**For(i=q.front+1;i<=q.rear;i++)**

**Cout<<q.data[i]<<” “;**

**}**

**Int main()**

**{ Queue obj;**

**Int ch,x;**

**Do{ cout<<”\n 1.Insert Job\n 2.Delete Job\n 3.Display\n 4.Exit\n Enter your choice : “;**

**Cin>>ch;**

**Switch(ch)**

**{ case 1: if (!obj.isfull())**

**{ cout<<”\n Enter data : \n”;**

**Cin>>x;**

**Obj.enqueue(x);**

**Cout<<endl;**

**}**

**Else**

**Cout<< “Queue is overflow!!!\n\n”;**

**Break;**

**Case 2: if(!obj.isempty())**

**Cout<<”\n Deleted Element = “<<obj.delqueue()<<endl;**

**Else**

**{ cout<<”\n Queue is underflow!!!\n\n”; }**

**Cout<<”\nRemaining Jobs : \n”;**

**Obj.display();**

**Break;**

**Case 3: if (!obj.isempty())**

**{ cout<<”\n Queue contains : \n”;**

**Obj.display();**

**}**

**Else**

**Cout<<”\n Queue is empty!!!\n\n”;**

**Break;**

**Case 4: cout<<”\n Exiting Program…..”;**

**}**

**}while(ch!=4);**

**Return 0;**

**}**

**OUTPUT:**

**1.Insert Job**

**2.Delete Job**

**3.Display**

**4.Exit**

**Enter your choice : 1**

**Enter data :**

**10**

**1.Insert Job**

**2.Delete Job**

**3.Display**

**4.Exit**

**Enter your choice : 1**

**Enter data :**

**20**

**1.Insert Job**

**2.Delete Job**

**3.Display**

**4.Exit**

**Enter your choice : 1**

**Enter data :**

**30**

**1.Insert Job**

**2.Delete Job**

**3.Display**

**4.Exit**

**Enter your choice : 3**

**Queue contains :**

**10 20 30**

**1.Insert Job**

**2.Delete Job**

**3.Display**

**4.Exit**

**Enter your choice : 2**

**Deleted Element = 10**

**Remaining Jobs :**

**20 30**

**1.Insert Job**

**2.Delete Job**

**3.Display**

**4.Exit**

**Enter your choice : 2**

**Deleted Element = 20**

**Remaining Jobs :**

**30**

**1.Insert Job**

**2.Delete Job**

**3.Display**

**4.Exit**

**Enter your choice : 4**

**Exiting Program…..**