Group E1:--- Kaustubh Shrikant Kabra SE COMP-1 20

Program:---

```
#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:";
                cin>>x;
                obj.enqueue(x);
        }
      else
           cout<< "Queue is overflow";
       break;
case 2: if(!obj.isempty())
                 cout<<"\n Deleted Element="<<obj.delqueue();
          else
                {   cout<<"\n Queue is underflow";  }
          cout<<"\nremaining jobs :";
          obj.display();
       break;
case 3: if (!obj.isempty())
    {  cout<<"\n Queue contains:";
           obj.display();
    }
    else
            cout<<"\n Queue is empty";
   break;
case 4: cout<<"\n Exit";
```

```
      }
    }while(ch!=4);
return 0;
}
```

Output:-

```
/************************************OUTPUT*****************************
 1. insert job
 2.delete job
 3.display
 4.Exit
 Enter your choice:1
 Enter data:34

 1. insert job
 2.delete job
 3.display
 4.Exit
 Enter your choice:1
 Enter data:64

 1. insert job
 2.delete job
 3.display
```

4.Exit

Enter your choice:1

Enter data:84

1. insert job

2.delete job

3.display

4.Exit

Enter your choice:1

Enter data:93

1. insert job

2.delete job

3.display

4.Exit

Enter your choice:3

Queue contains:

34 64 84 93

1. insert job

2.delete job

3.display

4.Exit

Enter your choice:2

Deleted Element=34

remaining jobs :

64 84 93

1. insert job

2.delete job

3.display

4.Exit

Enter your choice:3

Queue contains:

64 84 93

1. insert job

2.delete job

3.display

4.Exit

Enter your choice:4

Exit*/