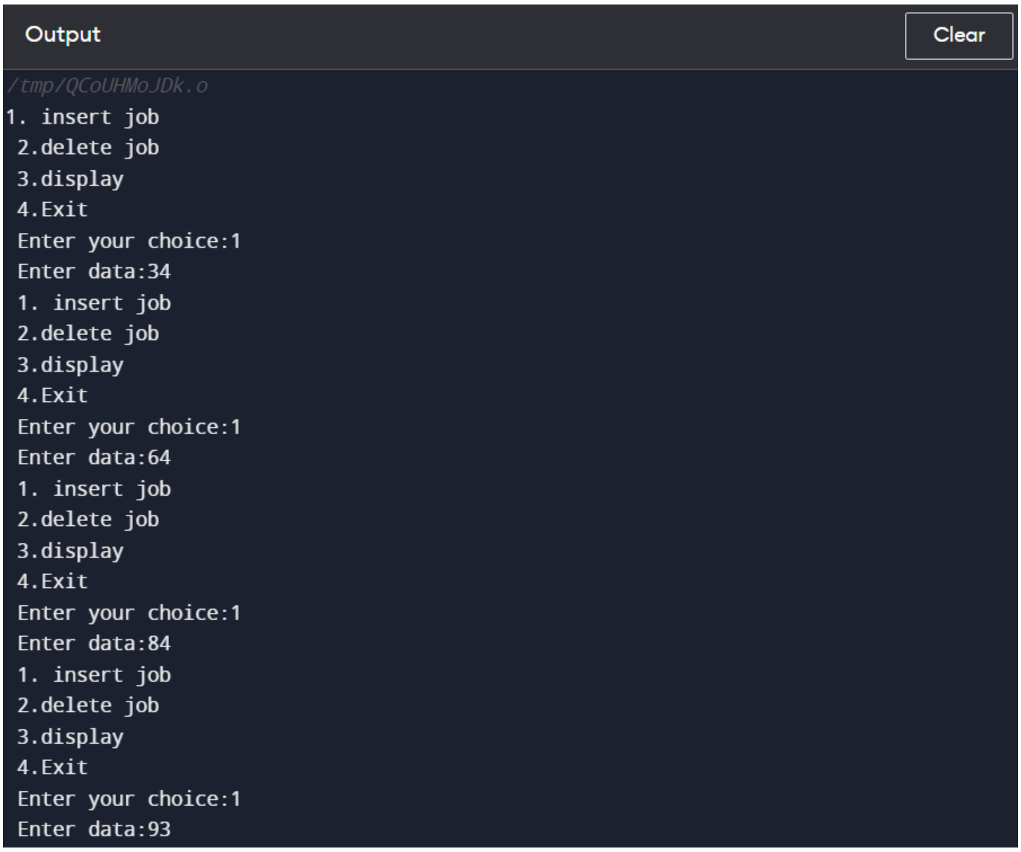
ASSIGNMENT NO : 4

PROGRAM :

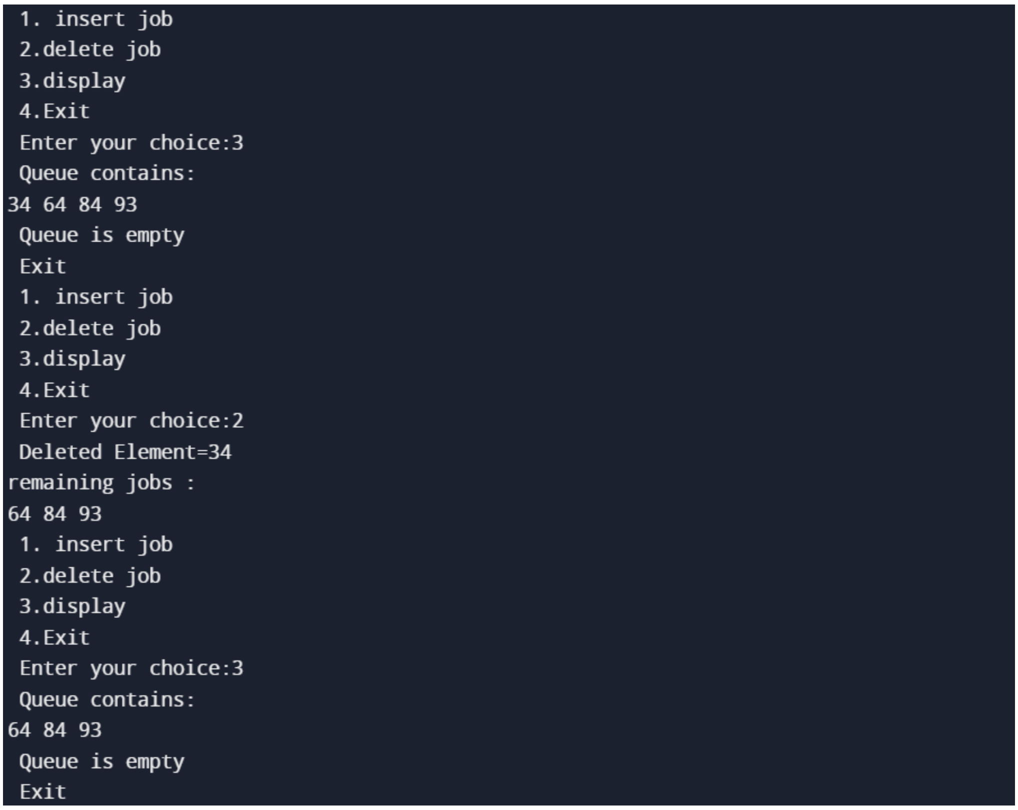
```
#include <iostream>
#define MAX 10
using namespace std;
struct queue
{ int data[MAX];
int front,rear;
};
class Queue
{ struct queue q;
public:
Queue(){q.front=q.rear=-1;}
int isempty();
int isfull();
void enqueue(int);
int delqueue();
void display();
};
int Queue::isempty()
{
return(q.front==q.rear)?1:0;
}
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

break;

cout<<"\n Queue is empty";

case 4: cout<<"\n Exit";

}

}while(ch!=4);

return 0;

}
```

OUTPUT :



```
/tmp/QCoUHMoJDk.o
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
 Queue is empty
 Exit
 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
 Queue is empty
 Exit
```