

```
class CarService {  
  
    public static void main(String args[]){  
  
        Car_Queue q= new Car_Queue();  
  
        new Car_Owner(q);  
        new Car_Mechanic(q);  
  
        System.out.println("Press Ctrl+C to stop.");  
  
    }  
}
```

```
class Car_Queue{  
  
    int n;  
  
    boolean valueSet = false;  
  
    synchronized int get()  
    {  
  
        while(!valueSet)  
  
            try{  
  
                wait();
```

```
}
```

```
catch (InterruptedException e)
```

```
{
```

```
System.out.println("InterruptedException caught");
```

```
}
```

```
System.out.println("Service Provided:"+n);
```

```
valueSet = false;
```

```
notify();
```

```
return n;
```

```
}
```

```
synchronized void put(int n)
```

```
{
```

```
while(valueSet)
```

```
try{
```

```
wait();
```

```
}
```

```
catch(InterruptedException e)
```

```
{  
  
    System.out.println("InterruptedException caught");  
  
}
```

```
    this.n=n;
```

```
    valueSet = true;
```

```
    System.out.println("Order placed:"+n);
```

```
    notify();
```

```
}
```

```
}
```

```
class Car_Mechanic implements Runnable
```

```
{
```

```
    Car_Queue q;
```

```
    Car_Mechanic(Car_Queue q)
```

```
{
```

```
    this.q=q;
```

```
    new Thread(this,"Car_Mechanic").start();
```

```
}
```

```
public void run(){
```

```
int i=0;
```

```
while(true){
```

```
q.put(i++);
```

```
}
```

```
}
```

```
}
```

```
class Car_Owner implements Runnable {
```

```
Car_Queue q;
```

```
Car_Owner(Car_Queue q)
```

```
{
```

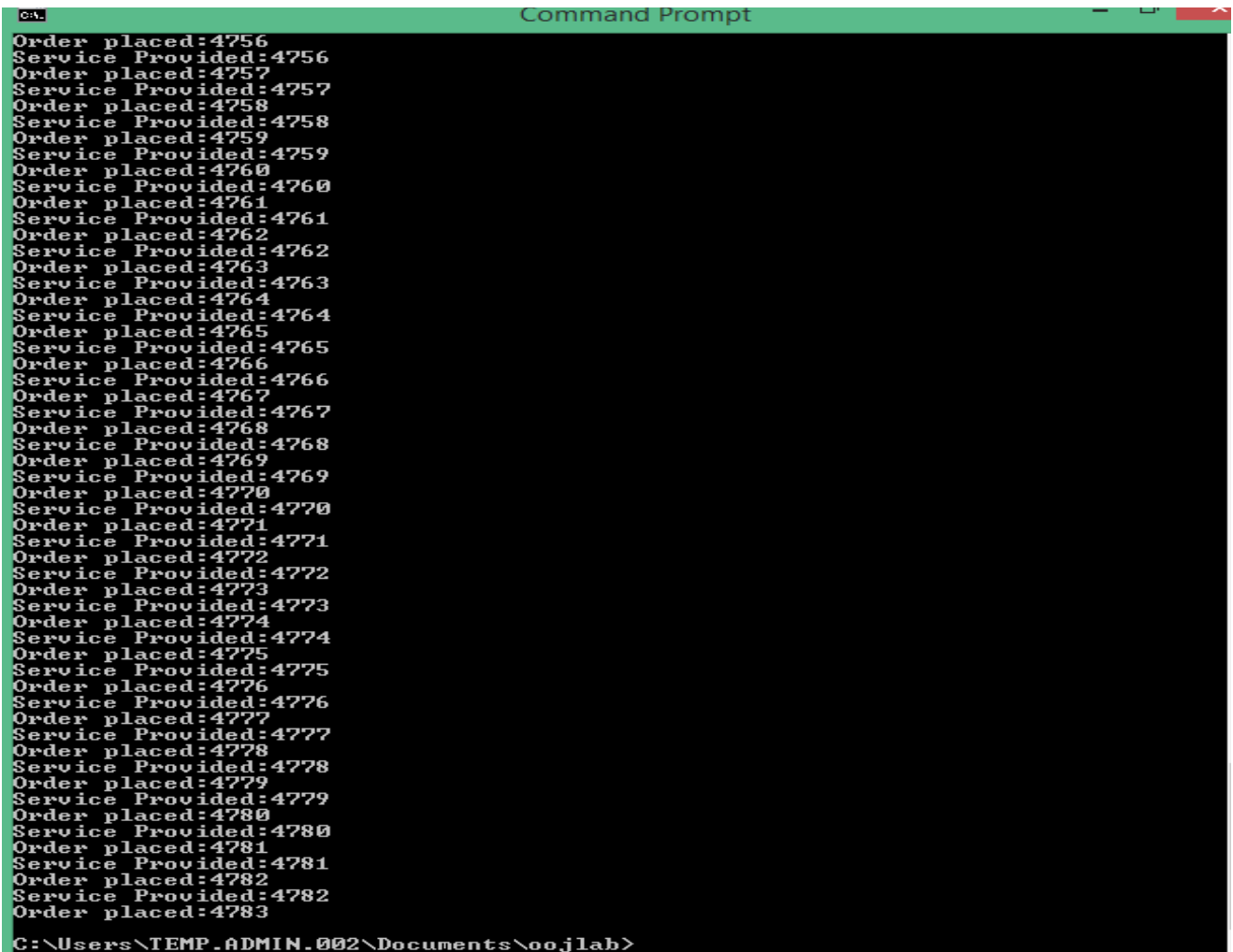
```
this.q=q;
```

```
new Thread(this,"Car_Owner").start();
```

```
}
```

```
public void run()
```

```
{  
  
while(true)  
{  
  
q.get();  
}  
}}
```



The screenshot shows a Windows Command Prompt window with a green title bar labeled 'Command Prompt'. The window contains a continuous stream of text output from a program, consisting of alternating lines: 'Order placed:' followed by a number and 'Service Provided:' followed by a number. The numbers range from 4756 to 4783. At the bottom of the window, the command prompt shows the current directory as 'C:\Users\TEMP.ADMIN.002\Documents\oojlab>'.

```
Order placed:4756  
Service Provided:4756  
Order placed:4757  
Service Provided:4757  
Order placed:4758  
Service Provided:4758  
Order placed:4759  
Service Provided:4759  
Order placed:4760  
Service Provided:4760  
Order placed:4761  
Service Provided:4761  
Order placed:4762  
Service Provided:4762  
Order placed:4763  
Service Provided:4763  
Order placed:4764  
Service Provided:4764  
Order placed:4765  
Service Provided:4765  
Order placed:4766  
Service Provided:4766  
Order placed:4767  
Service Provided:4767  
Order placed:4768  
Service Provided:4768  
Order placed:4769  
Service Provided:4769  
Order placed:4770  
Service Provided:4770  
Order placed:4771  
Service Provided:4771  
Order placed:4772  
Service Provided:4772  
Order placed:4773  
Service Provided:4773  
Order placed:4774  
Service Provided:4774  
Order placed:4775  
Service Provided:4775  
Order placed:4776  
Service Provided:4776  
Order placed:4777  
Service Provided:4777  
Order placed:4778  
Service Provided:4778  
Order placed:4779  
Service Provided:4779  
Order placed:4780  
Service Provided:4780  
Order placed:4781  
Service Provided:4781  
Order placed:4782  
Service Provided:4782  
Order placed:4783  
  
C:\Users\TEMP.ADMIN.002\Documents\oojlab>
```