

```

package Assignment;
class Vehicle extends Thread {
    String name;
    Object obj;
    Highway h = new Highway();
    Vehicle(Object obj,String name){
        this.obj=obj;
        this.name=name;
    }
    public void run()
    {
        synchronized (obj) {
            System.out.println(name+" vehicle has approached.");
            h.crossBridge(name);
            h.crossTollBooth(name);
            try {
                Thread.sleep(1000);
            } catch (InterruptedException e) {
                throw new RuntimeException(e);
            }
            try {
                obj.wait();
                obj.notify();
            } catch (InterruptedException e) {
                throw new RuntimeException(e);
            }
        }
    }
}

class Highway{
    void crossBridge(String name){
        System.out.println(name+" vehicle has crossed the bridge.");
    }
    void crossTollBooth(String name){
        System.out.println(name+" vehicle has crossed the toll booth.\n");
    }
}

public class Vehicles {
    public static void main(String[] args) {
        Object obj = new Object();
        Vehicle v1 = new Vehicle(obj,"First");
        Vehicle v2 = new Vehicle(obj,"Second");
        Vehicle v3 = new Vehicle(obj,"Third");
        Vehicle v4 = new Vehicle(obj,"Fourth");
        Vehicle v5 = new Vehicle(obj,"Fifth");
        v1.start();
        v2.start();
        v3.start();
        v4.start();
        v5.start();
    }
}

```

```
"C:\Program Files\Java\jdk-11.0.17\bin\java.
```

```
Second vehicle has approached.
```

```
Second vehicle has crossed the bridge.
```

```
Second vehicle has crossed the toll booth.
```

```
Third vehicle has approached.
```

```
Third vehicle has crossed the bridge.
```

```
Third vehicle has crossed the toll booth.
```

```
Fifth vehicle has approached.
```

```
Fifth vehicle has crossed the bridge.
```

```
Fifth vehicle has crossed the toll booth.
```

```
First vehicle has approached.
```

```
First vehicle has crossed the bridge.
```

```
First vehicle has crossed the toll booth.
```

```
Fourth vehicle has approached.
```

```
Fourth vehicle has crossed the bridge.
```

```
Fourth vehicle has crossed the toll booth.
```