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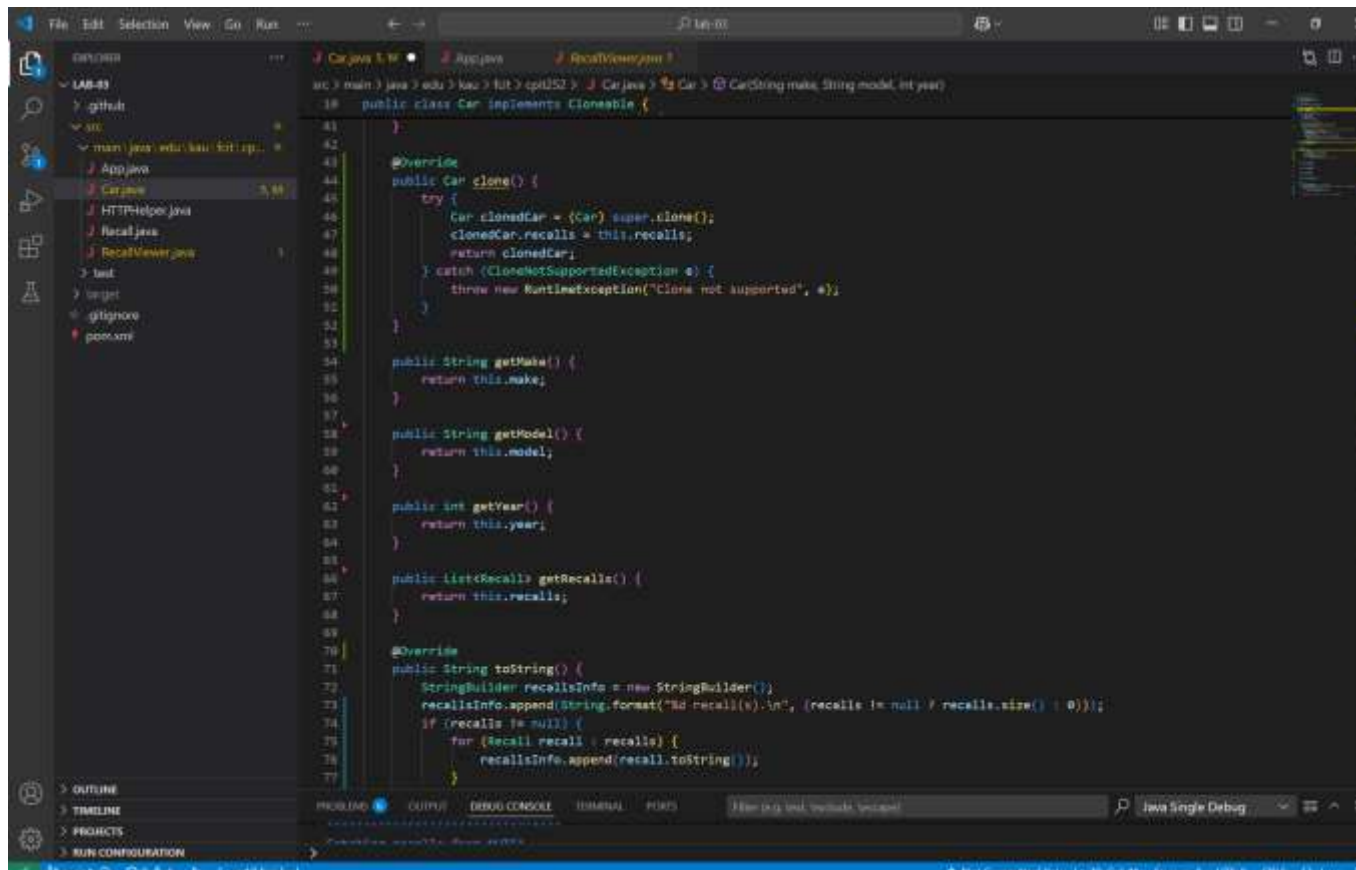
Lab3

```
Car.java 3, M • App.java RecallViewer.java 1
src > main > java > edu > kau > fcit > cpit252 > Car.java > Car > Car(String make, String model, int year)
1 package edu.kau.fcit.cpit252;
2
3 import java.net.URI;
4 import java.net.URISyntaxException;
5 import java.net.http.HttpResponse;
6 import java.util.List;
7
8 import org.apache.hc.core5.net.URIBuilder;
9
10 public class Car implements Cloneable {
11     private String make;
12     private String model;
13     private int year;
14     private List<Recall> recalls;
15
16     public Car(String make, String model, int year) {
17         this.make = make;
18         this.model = model;
19         this.year = year;
20         this.recalls = fetchRecalls();
21     }
22
23     private List<Recall> fetchRecalls() {
24         System.out.println("*****");
25         System.out.println("Fetching recalls from NHTSA...");
26         List<Recall> recallList = null;
27         try {
28             URIBuilder b = new URIBuilder("https://api.nhtsa.gov/recalls/recallsByVehicle");
29             b.addParameter("make", this.make);
30             b.addParameter("model", this.model);
31             b.addParameter("modelYear", Integer.toString(this.year));
32             URI uri = b.build();
33             HttpResponse<String> response = HTTPHelper.sendGet(uri);
34             if (response != null) {
35                 recallList = HTTPHelper.parseIntoCollection(response.body(), List.class, Recall.class);
36             }
37         } catch (URISyntaxException e) {
38             e.printStackTrace();
39         }
40     }
41 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS Filter (e.g. test, include, exclude) Java Single Debug

```
Car.java 5.11 • App.java RecallView.java 1
c:\main> java -Dedu.kau> f01> cp1252 -J Car.java -J CarString make, String model, int year
18 public class Car implements Cloneable {
23 private List<Recall> fetchRecalls() {
24     List<Recall> recalllist = null;
25     try {
26         URIBuilder b = new URIBuilder("https://api.nhtsa.gov/recalls/recallsByVehicle");
27         b.addParameter("make", this.make);
28         b.addParameter("model", this.model);
29         b.addParameter("modelYear", Integer.toString(this.year));
30         URI uri = b.build();
31         HttpResponse<String> response = HTTPHelper.sendGet(uri);
32         if (response != null) {
33             recalllist = HTTPHelper.parseIntoCollection(response.body(), List.class, Recall.class);
34         }
35     } catch (URISyntaxException e) {
36         e.printStackTrace();
37     }
38     return recalllist;
39 }
40
41 @Override
42 public Car clone() {
43     try {
44         Car clonedCar = (Car) super.clone();
45         clonedCar.recalls = this.recalls;
46         return clonedCar;
47     } catch (CloneNotSupportedException e) {
48         throw new RuntimeException("Clone not supported", e);
49     }
50 }
51
52 public String getMake() {
53     return this.make;
54 }
55
56 public String getModel() {
57     return this.model;
58 }
59
60 }
61
```

DEBUGGER OUTPUT DEBUG CONSOLE TERMINAL PORTS Filter [g, l, t, b, c, h, d, s, t, m, c, a, p, i] Java Single Debug



Q1

The screenshot shows an IDE with a Java file named `Car.java` and its test results. The code defines a `Car` class that implements `Cloneable`. It has a `clone()` method that attempts to clone the object and a `getMake()` method. The test results show that the build was successful and the program ran without errors.

```
18 public class Car implements Cloneable {
41 }
42
43 @Override
44 public Car clone() {
45     try {
46         Car clonedCar = (Car) super.clone();
47         clonedCar.recalls = this.recalls;
48         return clonedCar;
49     } catch (CloneNotSupportedException e) {
50         throw new RuntimeException("Clone not supported", e);
51     }
52 }
53
54 public String getMake() {
55     return this.make;
56 }
```

424-9153), or go to www.nhtsa.gov.
.....
Fetching recalls from NHTSA...
.....
| Manufacturer | Model | Year | Date | Component |
.....
Honda | Accord | 2013 | 11-11-2013 | FUEL SYSTEM, GASOLINE:DELIVERY:FUEL PUMP
.....
Honda | Accord | 2013 | 11-11-2013 | ELECTRICAL SYSTEM/BODY CONTROL MODULE:SOFTWARE
.....
Honda | Accord | 2013 | 11-11-2013 | FUEL SYSTEM, GASOLINE:DELIVERY:FUEL PUMP
.....
Honda | Accord | 2013 | 11-11-2013 | SEAT BELTS-FRONT:BUCKLE ASSEMBLY
.....
Honda | Accord | 2013 | 11-11-2013 | FUEL SYSTEM, GASOLINE:DELIVERY:FUEL PUMP
.....
BUILD SUCCESS
.....
Total time: 11.111 s
Finished at: 1111-11-11T11:11:11+03:00
.....

Q2

The screenshot shows the test results for the `Car` class. The test `assertImplementsCloneable` failed. The results show that the build failed due to the test failure.

```
java.lang.AssertionError
at edu.kau.fcit.cpit252.Lab3Test.assertImplementsCloneable(Lab3Test.java:43)

Results:

Failures:
  Lab3Test.assertImplementsCloneable:43

Tests run: 5, Failures: 1, Errors: 0, Skipped: 0

BUILD FAILURE
Total time: 1.111 s

Finished at: 1111-11-11T11:11:11+03:00
```

GIT Hub link

<https://github.com/Remey1/lab3-DesignnPattren.git>