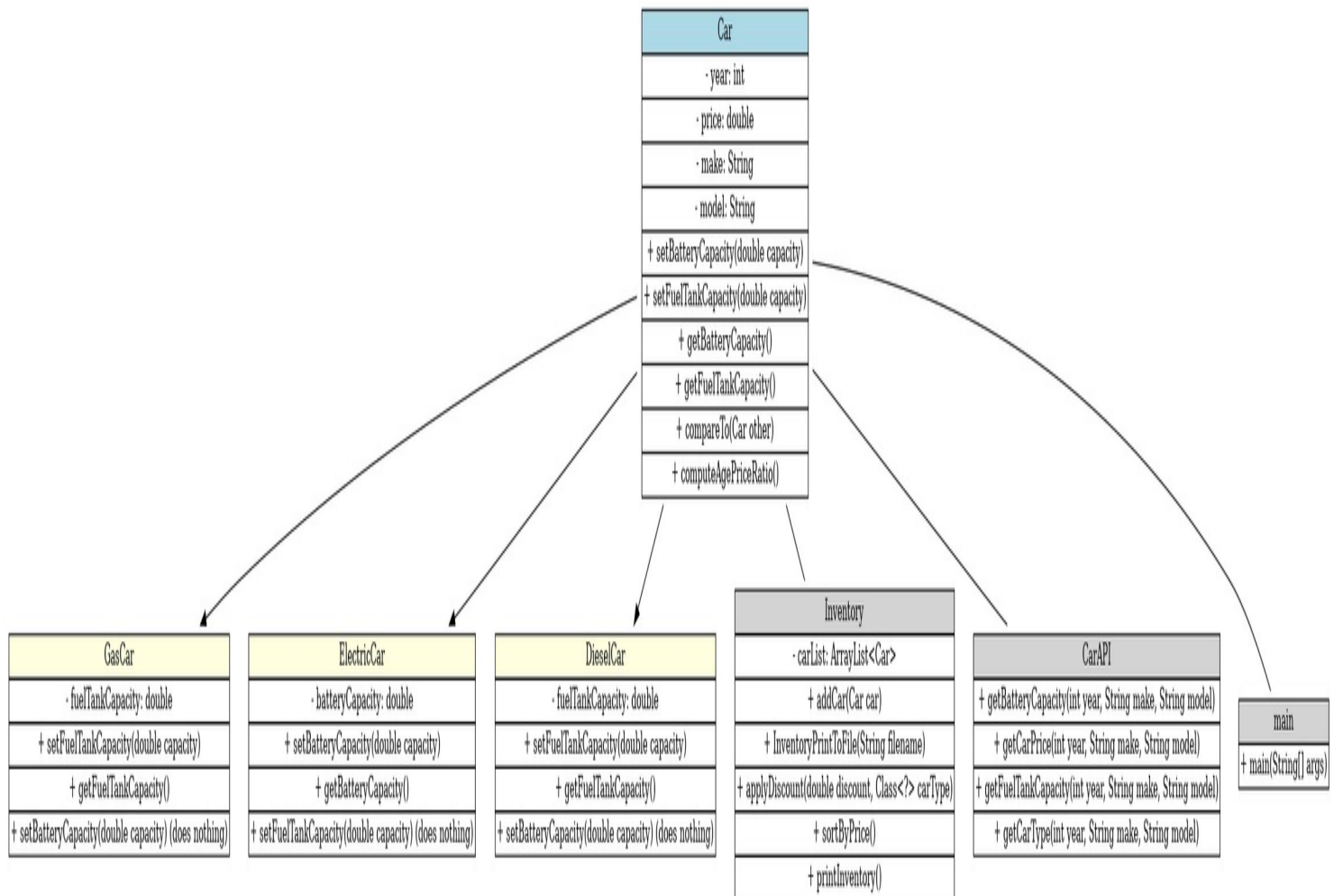


Lab 5



Question 1

You need to install a JSON parsing library because IntelliJ IDEA doesn't come with every possible library by default. This approach keeps things modular and lets developers pick the tools that best fit their needs, like Jackson or Gson for JSON parsing. It helps avoid unnecessary bloat, ensures you can choose compatible versions, and keeps things secure and maintainable. IntelliJ works great with tools like Maven or Gradle to make managing these dependencies easy, giving you the flexibility to build your project with just the libraries you need.

File Edit Selection View Go Run Terminal Help

The screenshot shows the Visual Studio Code interface with the following components:

- Explorer:** Displays the project structure under 'SCHOOL'. Files include 'Car.class', 'Car.java' (1, M), 'CarAPI.java' (9+, U), 'DieselCar.class', 'DieselCar.java' (4, M), 'ElectricCar.class', 'ElectricCar.java' (4, M), 'GasCar.class', 'GasCar.java' (4, M), 'Inventory.class', 'Inventory.java' (1, M), 'main.class', 'main.java' (1), and 'umlDiagram.png'. The 'CarAPI.java' file is selected.
- Code Editor:** Displays the content of 'CarAPI.java'. The code is as follows:

```
1 import org.json.JSONArray;
2 import org.json.JSONObject;
3
4 import java.io.BufferedReader;
5 import java.io.InputStreamReader;
6 import java.net.HttpURLConnection;
7 import java.net.URL;
8
9 public class CarAPI {
10     private static JSONObject jsonObject;
11
12     // Helper function to get the JSONObject from the API call
13     private static void makeAPICall(int year, String make, String model, String requestType) {
14         try {
15             // Construct the URL with query parameters
16             String urlStr = "https://carapi.app/api/"+requestType +
17                 "&verbose=yes&year="+year+"&make="+make.replace(target:" ", replacement:"%20")+"&model="+model.replace(target:" ", replacement:"%20");
18             URL url = new URL(urlStr);
19
20             // Open a connection
21             HttpURLConnection conn = (HttpURLConnection) url.openConnection();
22             conn.setRequestMethod(method:"GET");
23
24             // Get the response code
25             int responseCode = conn.getResponseCode();
26             //System.out.println("Response Code: " + responseCode);
27
28             // Read the response
29             BufferedReader in = new BufferedReader(new InputStreamReader(conn.getInputStream()));
30             String inputLine;
31             StringBuffer response = new StringBuffer();
32
33             while ((inputLine = in.readLine()) != null) {
34                 response.append(inputLine);
35             }
36             in.close();
37
38             // They need to add org.json to dependence
39             // Parse the entire JSON response into a JSONObject
40             jsonObject = new JSONObject(response.toString());
41         } catch (Exception e) {
42             // Handle exception
43         }
44     }
45 }
```
- Problems Panel:** Shows 34 problems.
- Output Panel:** Shows the output of the program.
- Terminal Panel:** Shows the terminal output.
- Ports Panel:** Shows the ports.
- Comments Panel:** Shows the comments.