```java
package App;

import java.io.BufferedReader;
import java.io.FileReader;
import java.io.IOException;
import java.util.Set;
import java.util.HashSet;

public class Main{
    public static void main(String[] args) {
        new Menu();
    }

}

public class Menu {
    int x;

    public Menu() {
        System.out.println("\t═══════════════════════════════════");
        System.out.println("\t\t\tMenu");
        System.out.println("\t═══════════════════════════════════");
        System.out.println("\t'⟶Navigate by inserting index⟵'");
        System.out.println("\t1. Browse parts");
        System.out.println("\t2. Find nearest dealership");
        System.out.println("\t3. Contact");
        System.out.println("\t4. Admin login");
        System.out.println("\t═══════════════════════════════════");
        System.out.print("\tInsert number between 1 to 4:  ");

        x = AppScanner.nextInt();

        while (x < 1 || x > 4) {
            System.out.println("\tInvalid range. \n\tPlease insert a number between 1 to 4.");
            System.out.print("\tSelect range: ");
            x = AppScanner.nextInt();
        }

        System.out.println("\t———————————————————————————————");

        switch (x) {
            case 1:
                // browse parts

                System.out.println("\t═══════════════════════════════════");
                System.out.println("\t\tBrowsing Window");

                System.out.println("\t═══════════════════════════════════");
                System.out.println("\t'⟶Navigate by inserting index⟵'");
                System.out.println("\t1. Browse all ");
                System.out.println("\t2. Browse by type ");
```

```
50                 System.out.println("\t3. Browse by brand ");
51                 System.out.println("\t4. Search by name");
52                 System.out.println("\t5. Go back to menu");
53 
   System.out.println("\t═══════════════════════════════════════");
54                 System.out.print("\tInsert number between 1 to 5:  ");
55 
56                 int x;
57 
58                 while (true) {
59                     try {
60                         x = AppScanner.nextInt();
61                         AppScanner.nextLine();  // Consume the newline
   character
62                         break;
63                     } catch (Exception e) {
64                         System.out.println("Invalid input. Please enter a
   number.");
65                         AppScanner.nextLine();  // Consume the invalid
   input
66                     }
67                 }
68 
69 
   System.out.println("\t---------------------------------------");
70 
71                 switch (x) {
72                     case 4:
73                         // search using user input
74                         System.out.print("\tInput parts name(must be 1:1):
   ");
75                         String s = AppScanner.nextLine();
76 
   System.out.println("\t---------------------------------------");
77                         // Call the printPartName method from Selector
   class
78                         Selector.printPartName(s);
79                         break;
80                     case 5:
81                         // creates new Menu instance
82                         new Menu();
83                         break;
84                     default:
85                         // creates new constructor from Selector class
86                         // works when input 1 to 3
87                         new Selector(x);
88                         break;
89                 }
90                 break;
91             case 2:
92                 new LocationFinder();
93 
94                 break;
95             case 3:
96                 System.out.println("\tEmail : fake@fake.com");
```

```
                System.out.println("\tCall  : fake number");
System.out.println("\t-------------------------------------");
                new Menu();
                break;
            case 4:
                // admin panel
                new LoginVerification();
                break;

            default:
                break;
        }
    }
}



public class Selector extends Parts {
    int x;

    public Selector(int x) {
        super(0, "", "", "", 0, 0);
        this.x = x;
        switch (x) {
            case 1:
                printPartAll();
                break;
            case 2:
                printPartType();
                break;
            case 3:
                printPartBrand();
                break;
            default:
                break;
        }
        new CallBack();
    }

    public static void printPartAll() {
        String csvFilePath = "Database/PartsData.csv";

        try (BufferedReader br = new BufferedReader(new
FileReader(csvFilePath))) {
            String line;
            boolean isFirstLine = true;

            while ((line = br.readLine()) != null) {
                if (isFirstLine) {
                    isFirstLine = false;
                    continue;
                }

                Parts part = Parts.createFromCSVLine(line);
```

```
                printPart(part);
            }
        } catch (IOException e) {
            e.printStackTrace();
        }
    }

    private static void printPartAll(String s) {
        String csvFilePath = "Database/PartsData.csv";
        boolean found = false;

        try (BufferedReader br = new BufferedReader(new
FileReader(csvFilePath))) {
            String line;
            boolean isFirstLine = true;

            while ((line = br.readLine()) ≠ null) {
                if (isFirstLine) {
                    isFirstLine = false;
                    continue;
                }

                Parts part = Parts.createFromCSVLine(line);
                if (part.type.equalsIgnoreCase(s) ||
part.brand.equalsIgnoreCase(s) || part.name.equalsIgnoreCase(s)) {
                    printPart(part);
                    found = true;
                }
            }
        } catch (IOException e) {
            e.printStackTrace();
        }

        if (!found) {
            System.out.println("No parts found for the specified criteria:
" + s);
        }
    }

    public void printPartType() {
        // Use AppScanner instead of direct Scanner
        System.out.println("Please select which type of product you want
to see by, inserting number(1-6)");
        System.out.println("'⟶ 1 for Engine.");
        System.out.println("'⟶ 2 for Wheels.");
        System.out.println("'⟶ 3 for Turbo.");
        System.out.println("'⟶ 4 for ECU.");
        System.out.println("'⟶ 5 for Rear Wing.");
        System.out.println("'⟶ 6 for Aero Kit.");
        System.out.print("Select range: ");
        int y = AppScanner.nextInt();

        while (y < 1 || y > 6) {
            System.out.println("Invalid range. Please insert a number
between 1 to 6: ");
```

```
            System.out.print("Select range: ");
            y = AppScanner.nextInt();
        }

        switch (y) {
            case 1:
                printPartAll("Engine");
                break;
            case 2:
                printPartAll("Wheels");
                break;
            case 3:
                printPartAll("Turbo");
                break;
            case 4:
                printPartAll("ECU");
                break;
            case 5:
                printPartAll("Rear Wing");
                break;
            case 6:
                printPartAll("Aero Kit");
                break;
            default:
                break;
        }
    }

    private void printPartBrand() {
        String csvFilePath = "Database/PartsData.csv";
        Set<String> uniqueStrings =
UniqueStringGenerator.generateUniqueStrings(csvFilePath);

        System.out.println("Unique Strings:");
        int i = 1;
        for (String str : uniqueStrings) {
            System.out.println(i++ + " for " + str);
        }

        int y = AppScanner.nextInt();
        while (y < 1 || y > (i - 1)) {
            System.out.println("Invalid range. Please insert a number
between 1 to " + (i - 1) + "");
            System.out.print("Select range: ");
            y = AppScanner.nextInt();
        }

        i = 1;
        for (String str : uniqueStrings) {
            if (i == y) {
                System.out.println("\t=====You chose " + str + "=====");
                System.out.println("=====The available parts from " + str
+ " are=====");
                System.out.println();
                printPartAll(str);
```

```
            } else {
                // do nothing
            }
            i++;
        }
    }

    public static void printPartName(String s) {
        printPartAll(s);
        new CallBack();
    }

    private static void printPart(Parts part) {
        PartPrinter.printPartInfo(part);
    }
}


public class UniqueStringGenerator {
    //checks the different brand name and act likes a dictionary that holds unique string
    public static Set<String> generateUniqueStrings(String csvFilePath) {
        Set<String> uniqueStrings = new HashSet<>();

        try (BufferedReader br = new BufferedReader(new FileReader(csvFilePath))) {
            String line;
            boolean isFirstLine = true;

            while ((line = br.readLine()) != null) {
                if (isFirstLine) {
                    isFirstLine = false;
                    continue;
                }

                String[] data = line.split(",");
                //  index 3 contains the string of interest
                String stringValue = data.length > 3 ? data[3].trim() : "";

                if (!stringValue.isEmpty()) {
                    uniqueStrings.add(stringValue);
                }
            }
        } catch (IOException e) {
            e.printStackTrace();
        }

        return uniqueStrings;
    }
}

```