**Assignment #3 – Automation Testing**

Minsun Park

Student ID: 8380719

PROG2070 – Programming: Software Quality A

Baljeet S. Bilkhu

March 31, 2022

**Part-1**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Accidents on record | >=3 | | | | | | | | <3 | | | | | | | |
| Driving experience | no experience | | 1 year | | 2 to 9  years | | >9 years | | no experience | | 1 year | | 2 to 9  years | | >9 years | |
| Age | >=30  **-** | <30  **-** | >=30  **-** | <30  **-** | >=30  **-** | <30  **-** | >=30  **-** | <30  **-** | >=30 | <30 | >=30 | <30 | >=30 | <30 | >=30 | <30 |
|  |  | |  | |  | |  | |  |  |  |  |  |  |  |  |
| Refuse | X | | X | | X | | X | |  |  |  |  |  |  |  |  |
| 1800 |  | |  | |  | |  | |  |  |  |  |  |  | X | X |
| 2500 |  | |  | |  | |  | |  |  | X | X | X | X |  |  |
| 4000 |  | |  | |  | |  | | X | X |  |  |  |  |  |  |
| Reduction of 25% |  | |  | |  | |  | |  |  |  |  | X |  | X |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Accidents  on record | >=3 | <3 | | | | | |
| Driving  experience |  | no experience | 1 year | 2 to 9 years | | >9 years | |
| Age |  |  |  | >=30 | <30 | >=30 | <30 |
|  |  |  |  |  |  |  |  |
| Refuse | X |  |  |  |  |  |  |
| 1800 |  |  |  |  |  | X | X |
| 2500 |  |  | X | X | X |  |  |
| 4000 |  | X |  |  |  |  |  |
| Reduction of 25% |  |  |  | X |  | X |  |

|  |  |  |
| --- | --- | --- |
| **Test ID** | **Test Steps** | **Expected Outcomes** |
| T001 | As a driver with more than three accidents on record | Insurance subscription is refused. |
| T002 | As a driver who has no driving experience | Apply a base rate of $4000 annually |
| T003 | As a driver who has experience in driving for a year | Apply a base rate of $2500 annually |
| T004 | As a driver aged 30 or older who has experience in driving for 2~9 years | Apply a rate reduction of 25% of the base rate of $2500 |
| T005 | As a driver aged under 30 who has experience in driving for 2~9 years | Apply a base rate of $2500 annually |
| T006 | As a driver aged 30 or older who has experience in driving more than 10 years | Apply a rate reduction of 25% of the base rate of $1800 |
| T007 | As a driver aged under 30 who has experience in driving more than 10 years | Apply a base rate of $1500 annually |

**Part-2**

**Task 1: HTML/CSS/JavaScript Web Application**

**Web Screenshots**

**Graphical user interface, application

Description automatically generated**

**Graphical user interface

Description automatically generated**

**Graphical user interface, text, application

Description automatically generated**

**Graphical user interface, text, application, website

Description automatically generated**

**Graphical user interface, text, email

Description automatically generated**

**Graphical user interface, text

Description automatically generated**

**Graphical user interface, text, application

Description automatically generated**

**Graphical user interface, text, application, email

Description automatically generated**

**Graphical user interface, application

Description automatically generated**

**Web Application Source Code**

**JSP**

* AddVehicle.jsp

<%@page contentType="text/html" pageEncoding="UTF-8"%>

<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>

<jsp:include page="/Banner.jsp" />

<html lang="en">

<head>

<!-- Required meta tags -->

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<!-- Bootstrap CSS -->

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-1BmE4kWBq78iYhFldvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqyl2QvZ6jIW3" crossorigin="anonymous">

<link rel="stylesheet" href="<c:url value='css.css'/>">

<title>Add a Vehicle</title>

</head>

<body>

<section>

<h1>Enter information</h1>

<br/>

<p style="color: red" id="message"><i>${message}</i></p>

<h3>Seller's information</h3>

<br/>

<div class="row">

<div class="col-sm-6 col-sm-offset-3">

<form action="AddVehicle" method="post">

<input type="hidden" name="action" value="add">

<div class="row g-2">

<div class="form-group col-md-6">

<label for="inputfName">First Name</label>

<input type="text" class="form-control" name="fName" value="${vehicle.fName}" placeholder="First Name">

</div>

<div class="form-group col-md-6">

<label for="inputlName">Last Name</label>

<input type="text" name="lName" class="form-control" value="${vehicle.lName}" placeholder="Last Name">

</div>

</div>

<div class="row g-4">

<div class="form-group col-md-4">

<label for="inputAddress">Address</label>

<input type="text" name="address" class="form-control" value="${vehicle.address}" placeholder="Address">

</div>

<div class="form-group col-md-3">

<label for="inputCity">City</label>

<input type="text" name="city" class="form-control" value="${vehicle.city}" placeholder="City">

</div>

<div class="form-group col-md-2">

<label for="inputProvince">Province</label>

<select id="province" name="province" class="form-control" value="${vehicle.province}">

<option value="AB">AB</option>

<option value="BC">BC</option>

<option value="MB">MB</option>

<option value="NB">NB</option>

<option value="NL">NL</option>

<option value="NS">NS</option>

<option value="ON">ON</option>

<option value="PE">PE</option>

<option value="QC">QC</option>

<option value="SK">SK</option>

</select><br><br>

</div>

<div class="form-group col-md-3">

<label for="inputpCode">Postal Code</label>

<input type="text" name="pCode" class="form-control" value="${vehicle.pCode}" placeholder="2N2 N2N">

</div>

</div>

<div class="row g-2">

<div class="form-group col-md-6">

<label for="inputpNumber">Phone Number</label>

<input type="text" name="pNumber" class="form-control" value="${vehicle.pNumber}" placeholder="000-000-0000 or (000)000-0000">

</div>

<div class="form-group col-md-6">

<label for="inputlName">Email</label>

<input type="email" name="email" class="form-control" value="${vehicle.email}" placeholder="abc@gmail.com"><br>

</div>

</div>

<h3>Vehicle's information</h3><br>

<div class="row g-3">

<div class="form-group col-md-4">

<label for="inputMake">Make</label>

<input type="text" name="make" class="form-control" value="${vehicle.make}">

</div>

<div class="form-group col-md-4">

<label for="inputModel">Model</label>

<input type="text" name="model" class="form-control" value="${vehicle.model}">

</div>

<div class="form-group col-md-4">

<label for="inputYear">Year</label>

<input type="text" name="year" class="form-control" value="${vehicle.year}">

</div>

</div>

<label>&nbsp;&nbsp;&nbsp;&nbsp;&nbsp;</label>

<div class="col-auto">

<input type="submit" value="Submit" class="btn btn-primary"/>

</div>

</form>

</section>

</div>

</div>

<!-- Optional JavaScript; choose one of the two! -->

<!-- Option 1: Bootstrap Bundle with Popper -->

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-ka7Sk0Gln4gmtz2MlQnikT1wXgYsOg+OMhuP+IlRH9sENBO0LRn5q+8nbTov4+1p" crossorigin="anonymous"></script>

<!-- Option 2: Separate Popper and Bootstrap JS -->

<!--

<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js" integrity="sha384-7+zCNj/IqJ95wo16oMtfsKbZ9ccEh31eOz1HGyDuCQ6wgnyJNSYdrPa03rtR1zdB" crossorigin="anonymous"></script>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.min.js" integrity="sha384-QJHtvGhmr9XOIpI6YVutG+2QOK9T+ZnN4kzFN1RtK3zEFEIsxhlmWl5/YESvpZ13" crossorigin="anonymous"></script>

-->

</body>

</html>

* Banner.jsp

<%@page contentType="text/html" pageEncoding="UTF-8"%>

<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<!-- Bootstrap CSS -->

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-1BmE4kWBq78iYhFldvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqyl2QvZ6jIW3" crossorigin="anonymous">

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">

<link rel="stylesheet" href="<c:url value='/styles/main2.css'/> ">

<script src="http://html5shiv.googlecode.com/svn/trunk/html5.js"></script>

<title>Home</title>

</head>

<body>

<nav class="navbar navbar-expand-md navbar-dark bg-dark fixed-top">

<a class="navbar-brand" href="index.jsp">Sell your Vehicle Now!</a>

<button class="navbar-toggler" type="button" data-toggle="collapse" data-target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-expanded="false" aria-label="Toggle navigation">

<span class="navbar-toggler-icon"></span>

</button>

<div class="collapse navbar-collapse" id="navbarSupportedContent">

<ul class="navbar-nav mr-auto">

<li class="nav-item active">

<a class="nav-link" href="index.jsp">Home</a>

</li>

<li class="nav-item">

<a class="nav-link" href="ViewVehicle">List of Entered Vehicle</a>

</li>

</ul>

</div>

</nav>

<!-- Optional JavaScript; choose one of the two! -->

<!-- Option 1: Bootstrap Bundle with Popper -->

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-ka7Sk0Gln4gmtz2MlQnikT1wXgYsOg+OMhuP+IlRH9sENBO0LRn5q+8nbTov4+1p" crossorigin="anonymous"></script>

<!-- Option 2: Separate Popper and Bootstrap JS -->

<!--

<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js" integrity="sha384-7+zCNj/IqJ95wo16oMtfsKbZ9ccEh31eOz1HGyDuCQ6wgnyJNSYdrPa03rtR1zdB" crossorigin="anonymous"></script>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.min.js" integrity="sha384-QJHtvGhmr9XOIpI6YVutG+2QOK9T+ZnN4kzFN1RtK3zEFEIsxhlmWl5/YESvpZ13" crossorigin="anonymous"></script>

-->

</body>

</html>

* ListVehicle.jsp

<%@page import="sell.info.Vehicle"%>

<%@page import="java.util.ArrayList"%>

<%@page contentType="text/html" pageEncoding="UTF-8"%>

<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>

<jsp:include page="/Banner.jsp" />

<!DOCTYPE html>

<html lang="en">

<head>

<meta http-equiv="Content-Type" content="text/html; charset=UTF-8">

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="<c:url value='css.css'/>">

<!-- Bootstrap CSS -->

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-1BmE4kWBq78iYhFldvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqyl2QvZ6jIW3" crossorigin="anonymous">

<title>Vehicles on File</title>

</head>

<body>

<h1>List of Vehicles</h1><br>

<p id="veInfoLetter">Vehicle Information</p>

<div class="row">

<div class="col-sm-6 col-sm-offset-3" id="tbSellInfo">

<caption>Seller's information</caption>

<table class="table table-striped">

<thead>

<tr>

<th>First Name</th>

<th>Last Name</th>

<th>Address</th>

<th>City</th>

<th>Province</th>

<th>Postal Code</th>

<th>Phone Number</th>

<th>Email</th>

</tr>

</thead>

<tbody>

<c:forEach var="item" items="${vehicles}">

<tr>

<td>${item.fName}</td>

<td>${item.lName}</td>

<td>${item.address}</td>

<td>${item.city}</td>

<td>${item.province}</td>

<td>${item.pCode}</td>

<td>${item.pNumber}</td>

<td>${item.email}</td>

</tr>

</c:forEach>

</tbody>

</table>

</div>

<div class="tbVeInfo">

<div class="col-sm-4 col-sm-offset-3">

<caption>Vehicle's information</caption>

<table class="table table-striped">

<thead>

<tr>

<th>Make</th>

<th>Model</th>

<th>Year</th>

<th>JD Power and Associates page</th>

</tr>

</thead>

<tbody>

<c:forEach var="item" items="${vehicles}">

<tr>

<td>${item.make}</td>

<td>${item.model}</td>

<td>${item.year}</td>

<td><a href="${item.site}">${item.site}</a></td>

</tr>

</c:forEach>

</tbody>

</table>

</div>

</div>

</div>

<!-- Optional JavaScript; choose one of the two! -->

<!-- Option 1: Bootstrap Bundle with Popper -->

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-ka7Sk0Gln4gmtz2MlQnikT1wXgYsOg+OMhuP+IlRH9sENBO0LRn5q+8nbTov4+1p" crossorigin="anonymous"></script>

<!-- Option 2: Separate Popper and Bootstrap JS -->

<!--

<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js" integrity="sha384-7+zCNj/IqJ95wo16oMtfsKbZ9ccEh31eOz1HGyDuCQ6wgnyJNSYdrPa03rtR1zdB" crossorigin="anonymous"></script>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.min.js" integrity="sha384-QJHtvGhmr9XOIpI6YVutG+2QOK9T+ZnN4kzFN1RtK3zEFEIsxhlmWl5/YESvpZ13" crossorigin="anonymous"></script>

-->

</body>

</html>

* ViewVehicle.jsp

<%@page import="java.util.ArrayList"%>

<%@page import="sell.info.Vehicle"%>

<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>

<%@page contentType="text/html" pageEncoding="UTF-8"%>

<jsp:include page="/Banner.jsp" />

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="<c:url value='css.css'/>">

<!-- Bootstrap CSS -->

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css"rel="stylesheet" integrity="sha384-1BmE4kWBq78iYhFldvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqyl2QvZ6jIW3" crossorigin="anonymous">

<title>View Added Vehicle</title>

</head>

<body>

<div>

<p id="veInfoLetter">Vehicle Information</p>

<div class="row">

<div class="col-sm-6 col-sm-offset-3" id="tbSellInfo">

<caption>Seller's information</caption>

<table class="table table-striped">

<thead>

<tr>

<th>First Name</th>

<th>Last Name</th>

<th>Address</th>

<th>City</th>

<th>Province</th>

<th>Postal Code</th>

<th>Phone Number</th>

<th>Email</th>

</tr>

</thead>

<tbody>

<tr>

<td>${vehicle.fName}</td>

<td>${vehicle.lName}</td>

<td>${vehicle.address}</td>

<td>${vehicle.city}</td>

<td>${vehicle.province}</td>

<td>${vehicle.pCode}</td>

<td>${vehicle.pNumber}</td>

<td>${vehicle.email}</td>

</tr>

</tbody>

</table>

</div>

<div class="tbVeInfo">

<div class="col-sm-4 col-sm-offset-3">

<caption>Vehicle's information</caption>

<table class="table table-striped">

<thead>

<tr>

<th>Make</th>

<th>Model</th>

<th>Year</th>

<th>JD Power and Associates page</th>

</tr>

</thead>

<tbody>

<tr>

<td>${vehicle.make}</td>

<td>${vehicle.model}</td>

<td>${vehicle.year}</td>

<td><a href="http://www.jdpower.com/cars/${vehicle.year}/${vehicle.make}/${vehicle.model}">http://www.jdpower.com/cars/${vehicle.year}/${vehicle.make}/${vehicle.model}</a></td>

</tr>

</tbody>

</table>

</div>

</div>

</div>

</div>

<!-- Optional JavaScript; choose one of the two! -->

<!-- Option 1: Bootstrap Bundle with Popper -->

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.bundle.min.js" integrity="sha384-ka7Sk0Gln4gmtz2MlQnikT1wXgYsOg+OMhuP+IlRH9sENBO0LRn5q+8nbTov4+1p" crossorigin="anonymous"></script>

<!-- Option 2: Separate Popper and Bootstrap JS -->

<!--

<script src="https://cdn.jsdelivr.net/npm/@popperjs/core@2.10.2/dist/umd/popper.min.js" integrity="sha384-7+zCNj/IqJ95wo16oMtfsKbZ9ccEh31eOz1HGyDuCQ6wgnyJNSYdrPa03rtR1zdB" crossorigin="anonymous"></script>

<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/js/bootstrap.min.js" integrity="sha384-QJHtvGhmr9XOIpI6YVutG+2QOK9T+ZnN4kzFN1RtK3zEFEIsxhlmWl5/YESvpZ13" crossorigin="anonymous"></script>

-->

</body>

</html>

* index.jsp

<%@page contentType="text/html" pageEncoding="UTF-8"%>

<%@ taglib prefix="c" uri="http://java.sun.com/jsp/jstl/core" %>

<jsp:include page="/Banner.jsp" />

<!doctype html>

<html lang="en">

<head>

<!-- Required meta tags -->

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1">

<link rel="stylesheet" href="<c:url value='css.css'/>">

<!-- Bootstrap CSS -->

<link href="https://cdn.jsdelivr.net/npm/bootstrap@5.1.3/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-1BmE4kWBq78iYhFldvKuhfTAU6auU8tT94WrHftjDbrCEXSU1oBoqyl2QvZ6jIW3" crossorigin="anonymous">

<title>Home</title>

</head>

<body>

<div class="btnAdd">

<form action="AddVehicle.jsp" method="post">

<input type="hidden" value="add">

<input type="submit" value="Add New Vechicle" class="btn btn-outline-dark btn-lg">

</form>

</div>

**CSS**

section{

position: relative;

left: 500px;

top: 80px;

}

.btnAdd{

position: relative;

left: 450px;

top: 100px;

}

.tbVeInfo{

position: relative;

left: 450px;

top:30px;

}

#tbSellInfo{

position: relative;

left: 450px;

top: 30px;

}

#veInfoLetter{

margin-top: 80px;

margin-left: 450px;

font-size: 30px;

font-weight: bold;

}

**Source Packages**

* AddvehicleServlet.java

package sell.admin;

import java.io.IOException;

import java.io.PrintWriter;

import java.util.ArrayList;

import java.util.regex.Matcher;

import java.util.regex.Pattern;

import javax.servlet.RequestDispatcher;

import javax.servlet.ServletContext;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import sell.data.VehicleDB;

import sell.info.Vehicle;

public class AddVehicleServlet extends HttpServlet {

protected void processRequest(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

response.setContentType("text/html;charset=UTF-8");

ServletContext context = getServletContext();

String path = context.getRealPath("/WEB-INF/books.txt");

String fName = request.getParameter("fName");

String lName = request.getParameter("lName");

String address = request.getParameter("address");

String city = request.getParameter("city");

String province = request.getParameter("province");

String pCode = request.getParameter("pCode");

String pNumber = request.getParameter("pNumber");

String email = request.getParameter("email");

String make = request.getParameter("make");

String model = request.getParameter("model");

String year = request.getParameter("year");

String site = "http://www.jdpower.com/cars/"+year+"/"+make+"/"+model;

String action = request.getParameter("action");

String url = "";

String regexForPCode = "^[0-9][A-Z][0-9]\\s[A-Z][0-9][A-Z]$";

String regexForPNumber = "^\\(?\\d{3}[\\-\\)]\\d{3}\\-\\d{4}$";

Pattern patternForPCode = Pattern.compile(regexForPCode);

Pattern patternForPNumber = Pattern.compile(regexForPNumber);

// perform action and set URL to appropriate page

if (action == null) {

url = "/AddVehicle.jsp";

}

else if (action.equals("add")) {

Vehicle vehicle = new Vehicle(fName, lName, address, city, province, pCode,

pNumber, email, make, model, year, site);

request.setAttribute("vehicle", vehicle);

//validate the inputs

String message = "";

if (fName == null || fName == "") {

message += "First Name is required. <br />";

}

if (lName == null || lName == "") {

message += "Last Name is required. <br />";

}

if (address == null || address == "") {

message += "Address is required. <br />";

}

if (city == null || city == "") {

message += "City is required. <br />";

}

if (province == null || province == "") {

message += "Province is required. <br />";

}

if (pCode == null || pCode == "") {

message += "Postal Code is required. <br />";

} else{

Matcher matcher = patternForPCode.matcher(pCode);

if(!matcher.matches()){

message += "Postal Code is invalid format. ex)2A2 A2A<br />";

}

}

if (pNumber == null || pNumber == "") {

message += "Phone Number is required. <br />";

} else{

Matcher matcher = patternForPNumber.matcher(pNumber);

if(!matcher.matches()){

message += "Postal Code is invalid format. ex)123-123-1234, or (123)123-1234<br />";

}

}

if (email == null || email == "") {

message += "Email is required. <br />";

}

if (make == null || make == "") {

message += "Vehicle make is required. <br />";

}

if (model == null || model == "") {

message += "Vehicle model is required. <br />";

}

if (year == null || year == "") {

message += "Vehicle year is required. <br />";

}

if (message == "") {

VehicleDB.insert(vehicle, path);

url = "/ViewVehicle.jsp";

} else {

request.setAttribute("message", message);

url = "/AddVehicle.jsp";

RequestDispatcher dispatcher = getServletContext().getRequestDispatcher(url);

dispatcher.forward(request, response);

}

request.setAttribute("vehicle", vehicle);

request.setAttribute("message", message);

}

getServletContext()

.getRequestDispatcher(url)

.forward(request, response);

}

// <editor-fold defaultstate="collapsed" desc="HttpServlet methods. Click on the + sign on the left to edit the code.">

/\*\*

\* Handles the HTTP <code>GET</code> method.

\*

\* @param request servlet request

\* @param response servlet response

\* @throws ServletException if a servlet-specific error occurs

\* @throws IOException if an I/O error occurs

\*/

@Override

protected void doGet(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

processRequest(request, response);

}

/\*\*

\* Handles the HTTP <code>POST</code> method.

\*

\* @param request servlet request

\* @param response servlet response

\* @throws ServletException if a servlet-specific error occurs

\* @throws IOException if an I/O error occurs

\*/

@Override

protected void doPost(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

processRequest(request, response);

}

/\*\*

\* Returns a short description of the servlet.

\*

\* @return a String containing servlet description

\*/

@Override

public String getServletInfo() {

return "Short description";

}// </editor-fold>

}

* ViewVehicleServlet.java

package sell.admin;

import java.io.IOException;

import java.io.PrintWriter;

import java.util.ArrayList;

import javax.servlet.RequestDispatcher;

import javax.servlet.ServletContext;

import javax.servlet.ServletException;

import javax.servlet.http.HttpServlet;

import javax.servlet.http.HttpServletRequest;

import javax.servlet.http.HttpServletResponse;

import sell.data.VehicleDB;

import sell.info.Vehicle;

public class ViewVehicleServlet extends HttpServlet {

/\*\*

\* Processes requests for both HTTP <code>GET</code> and <code>POST</code>

\* methods.

\*

\* @param request servlet request

\* @param response servlet response

\* @throws ServletException if a servlet-specific error occurs

\* @throws IOException if an I/O error occurs

\*/

protected void processRequest(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

ServletContext context = getServletContext();

String path = context.getRealPath("/WEB-INF/books.txt");

ArrayList<Vehicle> vehicles = VehicleDB.getBooks(path);

String message = "prueba prueba ";

request.setAttribute("vehicles", vehicles);

request.setAttribute("message", message);

RequestDispatcher dispatcher = getServletContext().getRequestDispatcher("/ListVehicle.jsp");

dispatcher.forward(request, response);

}

@Override

protected void doGet(HttpServletRequest request, HttpServletResponse response)

throws ServletException, IOException {

processRequest(request, response);

}

}

* VehicleDB.java

package sell.data;

import java.io.BufferedReader;

import java.io.File;

import java.io.FileReader;

import java.io.FileWriter;

import java.io.IOException;

import java.io.PrintWriter;

import java.util.ArrayList;

import static java.util.Collections.list;

import java.util.StringTokenizer;

import sell.info.Vehicle;

public class VehicleDB {

private static ArrayList<Vehicle> vehicles = null;

public static ArrayList<Vehicle> getBooks(String path)

{

vehicles = new ArrayList<Vehicle>();

File file = new File(path);

try

{

BufferedReader in =

new BufferedReader(

new FileReader(file));

String line = in.readLine();

while (line != null)

{

StringTokenizer t = new StringTokenizer(line, "|");

if (t.countTokens() >= 12)

{

String fName = t.nextToken();

String lName = t.nextToken();

String address = t.nextToken();

String city = t.nextToken();

String province = t.nextToken();

String pCode = t.nextToken();

String pNumber = t.nextToken();

String email = t.nextToken();

String make = t.nextToken();

String model = t.nextToken();

String year = t.nextToken();

String site = t.nextToken();

Vehicle vehicle = new Vehicle();

vehicle.setfName(fName);

vehicle.setlName(lName);

vehicle.setAddress(address);

vehicle.setCity(city);

vehicle.setProvince(province);

vehicle.setpCode(pCode);

vehicle.setpNumber(pNumber);

vehicle.setEmail(email);

vehicle.setMake(make);

vehicle.setModel(model);

vehicle.setYear(year);

vehicle.setSite(site);

vehicles.add(vehicle);

}

line = in.readLine();

}

in.close();

return vehicles;

}

catch(IOException e)

{

e.printStackTrace();

return null;

}

}

public static Vehicle getBook(String fName, String path)

{

vehicles = getBooks(path);

for (Vehicle vehicle : vehicles)

{

if (fName != null &&

fName.equalsIgnoreCase(vehicle.getfName()))

{

return vehicle;

}

}

return null;

}

public static boolean exists(String fName, String path)

{

vehicles = getBooks(path);

for (Vehicle vehicle : vehicles)

{

if (fName != null &&

fName.equalsIgnoreCase(vehicle.getfName()))

{

return true;

}

}

return false;

}

private static void saveBooks(ArrayList<Vehicle> vehicles,

String path)

{

try

{

File file = new File(path);

PrintWriter out =

new PrintWriter(

new FileWriter(file));

for (Vehicle vehicle : vehicles)

{

out.println(vehicle.getfName() + "|"

+ vehicle.getlName() + "|"

+ vehicle.getAddress() + "|"

+ vehicle.getCity() + "|"

+ vehicle.getProvince() + "|"

+ vehicle.getpCode() + "|"

+ vehicle.getpNumber() + "|"

+ vehicle.getEmail() + "|"

+ vehicle.getMake() + "|"

+ vehicle.getModel() + "|"

+ vehicle.getYear() + "|"

+ vehicle.getSite());

}

out.close();

}

catch(IOException e)

{

e.printStackTrace();

}

}

public static void insert(Vehicle product, String path)

{

vehicles = getBooks(path);

vehicles.add(product);

saveBooks(vehicles, path);

}

public static void update(Vehicle vehicle, String path)

{

vehicles = getBooks(path);

for (int i = 0; i < vehicles.size(); i++)

{

Vehicle b = vehicles.get(i);

if (vehicle.getfName() != null &&

vehicle.getfName().equalsIgnoreCase(b.getfName()))

{

vehicles.set(i, vehicle);

}

}

saveBooks(vehicles, path);

}

public static void delete(Vehicle vehicle, String path)

{

vehicles = getBooks(path);

for (int i = 0; i < vehicles.size(); i++)

{

Vehicle b = vehicles.get(i);

if (vehicle != null &&

vehicle.getfName().equalsIgnoreCase(b.getfName()))

{

vehicles.remove(i);

}

}

saveBooks(vehicles, path);

}

}

* Vehicle.java

package sell.info;

import java.io.Serializable;

public class Vehicle implements Serializable {

private String fName;

private String lName;

private String address;

private String city;

private String province;

private String pCode;

private String pNumber;

private String email;

private String make;

private String model;

private String year;

private String site;

public Vehicle() {

}

public Vehicle(String fName, String lName, String address, String city, String province, String pCode, String pNumber, String email, String make, String model, String year, String site) {

this.fName = fName;

this.lName = lName;

this.address = address;

this.city = city;

this.province = province;

this.pCode = pCode;

this.pNumber = pNumber;

this.email = email;

this.make = make;

this.model = model;

this.year = year;

this.site = site;

}

public String getSite() {

return site;

}

public void setSite(String site) {

this.site = site;

}

public String getfName() {

return fName;

}

public void setfName(String fName) {

this.fName = fName;

}

public String getlName() {

return lName;

}

public void setlName(String lName) {

this.lName = lName;

}

public String getAddress() {

return address;

}

public void setAddress(String address) {

this.address = address;

}

public String getCity() {

return city;

}

public void setCity(String city) {

this.city = city;

}

public String getProvince() {

return province;

}

public void setProvince(String province) {

this.province = province;

}

public String getpCode() {

return pCode;

}

public void setpCode(String pCode) {

this.pCode = pCode;

}

public String getpNumber() {

return pNumber;

}

public void setpNumber(String pNumber) {

this.pNumber = pNumber;

}

public String getEmail() {

return email;

}

public void setEmail(String email) {

this.email = email;

}

public String getMake() {

return make;

}

public void setMake(String make) {

this.make = make;

}

public String getModel() {

return model;

}

public void setModel(String model) {

this.model = model;

}

public String getYear() {

return year;

}

public void setYear(String year) {

this.year = year;

}

}

**Task 2: System Tests Using Selenium with the NUnit Test Framework**

**Source code for all C# system tests**

// Generated by Selenium IDE

using System;

using System.Collections;

using System.Collections.Generic;

using System.Linq;

using System.Threading;

using OpenQA.Selenium;

using OpenQA.Selenium.Chrome;

using OpenQA.Selenium.Firefox;

using OpenQA.Selenium.Remote;

using OpenQA.Selenium.Support.UI;

using OpenQA.Selenium.Interactions;

using NUnit.Framework;

[TestFixture]

public class DefaultSuiteTest

{

private IWebDriver driver;

public IDictionary<string, object> vars { get; private set; }

private IJavaScriptExecutor js;

[SetUp]

public void SetUp()

{

driver = new FirefoxDriver();

js = (IJavaScriptExecutor)driver;

vars = new Dictionary<string, object>();

}

[TearDown]

protected void TearDown()

{

driver.Quit();

}

[Test]

public void sellYourVehicleAllValidInputs2022BMWZ4()

{

//Arrange

string baseURL = "http://localhost:8088/SellVehicle/";

//Act

driver.Navigate().GoToUrl(baseURL);

driver.Manage().Window.Size = new System.Drawing.Size(909, 710);

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.Name("fName")).Click();

driver.FindElement(By.Name("fName")).SendKeys("Minsun");

driver.FindElement(By.Name("lName")).SendKeys("Park");

driver.FindElement(By.Name("address")).SendKeys("108 University Avenue West");

driver.FindElement(By.Name("city")).SendKeys("Waterloo");

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'BC']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'MB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NL']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NS']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'PE']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

driver.FindElement(By.Name("pCode")).SendKeys("2A2 A2a");

driver.FindElement(By.Name("pNumber")).Click();

driver.FindElement(By.Name("pNumber")).SendKeys("111-111-1111");

driver.FindElement(By.Name("email")).SendKeys("abc@gmail.com");

driver.FindElement(By.Name("make")).SendKeys("Honda");

driver.FindElement(By.Name("model")).SendKeys("Civic");

driver.FindElement(By.Name("year")).SendKeys("2022");

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.Name("pCode")).Click();

driver.FindElement(By.Name("pCode")).SendKeys("2A2 A2A");

driver.FindElement(By.CssSelector("html")).Click();

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.LinkText("http://www.jdpower.com/cars/2022/Honda/Civic")).Click();

//Assert

Assert.That(driver.FindElement(By.CssSelector(".title")).Text, Is.EqualTo("2022 Honda Civic"));

}

[Test]

public void sellYourVehicleAllFieldsInputRequire()

{

//Arrange

string baseURL = "http://localhost:8088/SellVehicle/";

//Act

driver.Navigate().GoToUrl(baseURL);

driver.Manage().Window.Size = new System.Drawing.Size(909, 710);

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.CssSelector(".btn")).Click();

//Assert

Assert.That(driver.FindElement(By.CssSelector(".col-sm-6")).Text, Is.EqualTo("First Name is required.Last Name is required.Address is required.City is required.Postal Code is required.Phone Number is required.Email is required.Vehicle make is required.Vehicle model is required.Vehicle year is required. "));

}

[Test]

public void sellYourVehicleIncorrectCarModelInformationNotdisplayedJDPowerPage()

{

//Arrange

string baseURL = "http://localhost:8088/SellVehicle/";

//Act

driver.Navigate().GoToUrl(baseURL);

driver.Manage().Window.Size = new System.Drawing.Size(909, 710);

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.Name("fName")).Click();

driver.FindElement(By.Name("fName")).SendKeys("Minsun ");

driver.FindElement(By.Name("fName")).Click();

driver.FindElement(By.Name("fName")).SendKeys("Minsun");

driver.FindElement(By.Name("lName")).SendKeys("Park");

driver.FindElement(By.Name("address")).SendKeys("108 University Avenue West");

driver.FindElement(By.Name("city")).SendKeys("Waterloo");

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'BC']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'MB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NL']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NS']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

driver.FindElement(By.Name("pCode")).SendKeys("2N2 N2N");

driver.FindElement(By.Name("pNumber")).SendKeys("555-555-5555");

driver.FindElement(By.Name("email")).SendKeys("abc@gmail.com");

driver.FindElement(By.Name("make")).SendKeys("Honda");

driver.FindElement(By.Name("model")).SendKeys("Z4");

driver.FindElement(By.Name("year")).SendKeys("2020");

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.LinkText("http://www.jdpower.com/cars/2020/Honda/Z4")).Click();

//Assert

Assert.That(driver.FindElement(By.LinkText("http://www.jdpower.com/cars/2020/Honda/Z4")).Text, Is.EqualTo("http://www.jdpower.com/cars/2020/Honda/Z4"));

}

[Test]

public void sellYourVehicleInvalidInputEmailWithoutAt()

{

//Arrange

string baseURL = "http://localhost:8088/SellVehicle/";

//Act

driver.Navigate().GoToUrl(baseURL);

driver.Manage().Window.Size = new System.Drawing.Size(909, 710);

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.Name("fName")).Click();

driver.FindElement(By.Name("fName")).SendKeys("Minsun");

driver.FindElement(By.Name("lName")).SendKeys("Park");

driver.FindElement(By.Name("address")).SendKeys("108 University Avenue West");

driver.FindElement(By.Name("city")).SendKeys("Waterloo");

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'BC']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'MB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NL']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NS']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

driver.FindElement(By.Name("pCode")).SendKeys("2N2 N2N");

driver.FindElement(By.Name("pNumber")).SendKeys("555-555-5555");

driver.FindElement(By.Name("email")).SendKeys("abcgmail.com");

driver.FindElement(By.Name("make")).SendKeys("BMW");

driver.FindElement(By.Name("model")).SendKeys("Z4");

driver.FindElement(By.Name("year")).SendKeys("2021");

driver.FindElement(By.CssSelector(".btn")).Click();

//Assert

Assert.That(driver.FindElement(By.Name("email")).Text, Is.EqualTo("abcgmail.com"));

}

[Test]

public void sellYourVehicleInvalidInputPhoneNumber11digits()

{

//Arrange

string baseURL = "http://localhost:8088/SellVehicle/";

//Act

driver.Navigate().GoToUrl(baseURL);

driver.Manage().Window.Size = new System.Drawing.Size(909, 710);

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.Name("fName")).Click();

driver.FindElement(By.Name("fName")).SendKeys("Minsun");

driver.FindElement(By.Name("lName")).SendKeys("Park");

driver.FindElement(By.Name("address")).SendKeys("108 University Avenue West");

driver.FindElement(By.Name("city")).SendKeys("Waterloo");

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'BC']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'MB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NL']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NS']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'PE']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

driver.FindElement(By.Name("pCode")).SendKeys("2A2 A2A");

driver.FindElement(By.Name("pNumber")).SendKeys("111-111-11111");

driver.FindElement(By.Name("email")).Click();

driver.FindElement(By.Name("email")).SendKeys("Mpark0719@conestogac.on.ca");

driver.FindElement(By.Name("make")).Click();

driver.FindElement(By.Name("make")).SendKeys("BMW");

driver.FindElement(By.Name("model")).SendKeys("Z4");

driver.FindElement(By.Name("year")).SendKeys("2022");

driver.FindElement(By.CssSelector(".btn")).Click();

//Assert

Assert.That(driver.FindElement(By.Name("pNumber")).Text, Is.EqualTo("111-111-11111"));

}

[Test]

public void sellYourVehicleInvalidInputPhoneNumberWithLetter()

{

//Arrange

string baseURL = "http://localhost:8088/SellVehicle/";

//Act

driver.Navigate().GoToUrl(baseURL);

driver.Manage().Window.Size = new System.Drawing.Size(909, 710);

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.Name("fName")).Click();

driver.FindElement(By.Name("fName")).SendKeys("Minsun");

driver.FindElement(By.Name("lName")).SendKeys("Park");

driver.FindElement(By.Name("address")).SendKeys("108 University Avenue West");

driver.FindElement(By.Name("city")).SendKeys("Waterloo");

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'BC']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'MB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NL']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NS']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

driver.FindElement(By.Name("pCode")).SendKeys("2A2 A2A");

driver.FindElement(By.Name("pNumber")).Click();

driver.FindElement(By.Name("pNumber")).SendKeys("222-222-22AB");

driver.FindElement(By.Name("email")).Click();

driver.FindElement(By.Name("email")).SendKeys("Mpark0719@conestogac.on.ca");

driver.FindElement(By.Name("make")).SendKeys("Honda");

driver.FindElement(By.Name("model")).SendKeys("Civic");

driver.FindElement(By.Name("year")).SendKeys("2022");

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.CssSelector("section")).Click();

//Assert

Assert.That(driver.FindElement(By.Name("pNumber")).Text, Is.EqualTo("222-222-22AB"));

}

[Test]

public void sellYourVehicleInvalidInputPhoneNumberWithoutHyphen()

{

//Arrange

string baseURL = "http://localhost:8088/SellVehicle/";

//Act

driver.Navigate().GoToUrl(baseURL);

driver.Manage().Window.Size = new System.Drawing.Size(909, 710);

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.Name("fName")).Click();

driver.FindElement(By.Name("fName")).SendKeys("Minsun");

driver.FindElement(By.Name("lName")).SendKeys("Park");

driver.FindElement(By.Name("address")).SendKeys("108 University Avenue West");

driver.FindElement(By.Name("city")).SendKeys("Waterloo");

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'BC']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'MB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NL']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NS']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'PE']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

driver.FindElement(By.Name("pCode")).SendKeys("2A2 A2A");

driver.FindElement(By.Name("pNumber")).Click();

driver.FindElement(By.Name("make")).Click();

driver.FindElement(By.Name("pNumber")).Click();

driver.FindElement(By.Name("pNumber")).SendKeys("333-3333333");

driver.FindElement(By.Name("email")).SendKeys("Mpark0719@conestogac.on.ca");

driver.FindElement(By.Name("make")).SendKeys("BMW");

driver.FindElement(By.Name("model")).SendKeys("Z4");

driver.FindElement(By.Name("year")).SendKeys("2020");

driver.FindElement(By.CssSelector(".btn")).Click();

//Assert

Assert.That(driver.FindElement(By.Name("pNumber")).Text, Is.EqualTo("333-3333333"));

}

[Test]

public void sellYourVehicleInvalidInputPostalCode6digits()

{

//Arrange

string baseURL = "http://localhost:8088/SellVehicle/";

//Act

driver.Navigate().GoToUrl(baseURL);

driver.Manage().Window.Size = new System.Drawing.Size(909, 710);

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.Name("fName")).Click();

driver.FindElement(By.Name("fName")).SendKeys("Minsun");

driver.FindElement(By.Name("lName")).SendKeys("Park");

driver.FindElement(By.Name("address")).SendKeys("108 University Avenue West");

driver.FindElement(By.Name("city")).SendKeys("Waterloo");

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'BC']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'MB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NL']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NS']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'PE']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

driver.FindElement(By.Name("pCode")).SendKeys("222 222");

driver.FindElement(By.Name("pNumber")).SendKeys("555-555-5555");

driver.FindElement(By.Name("email")).SendKeys("abc@gmail.com");

driver.FindElement(By.Name("make")).SendKeys("BMW");

driver.FindElement(By.Name("model")).SendKeys("Z4");

driver.FindElement(By.Name("year")).SendKeys("2021");

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.Name("pCode")).Click();

driver.FindElement(By.CssSelector(".row:nth-child(6)")).Click();

//Assert

Assert.That(driver.FindElement(By.Name("pCode")).Text, Is.EqualTo("222 222"));

}

[Test]

public void sellYourVehicleInvalidInputPostalCodeAllLowerCase()

{

//Arrange

string baseURL = "http://localhost:8088/SellVehicle/";

//Act

driver.Navigate().GoToUrl(baseURL);

driver.Manage().Window.Size = new System.Drawing.Size(909, 710);

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.Name("fName")).Click();

driver.FindElement(By.Name("fName")).SendKeys("Minsun");

driver.FindElement(By.Name("lName")).SendKeys("Park");

driver.FindElement(By.Name("address")).SendKeys("108 University Avenue West");

driver.FindElement(By.Name("city")).SendKeys("Waterloo");

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'BC']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'MB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NL']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NS']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

driver.FindElement(By.Name("pCode")).SendKeys("2a2 a2a");

driver.FindElement(By.Name("pNumber")).Click();

driver.FindElement(By.Name("pNumber")).SendKeys("333-333-3333");

driver.FindElement(By.Name("email")).SendKeys("Mpark0719@conestogac.on.ca");

driver.FindElement(By.Name("make")).SendKeys("Honda");

driver.FindElement(By.Name("model")).SendKeys("Civic");

driver.FindElement(By.Name("year")).SendKeys("2020");

driver.FindElement(By.CssSelector(".btn")).Click();

//Assert

Assert.That(driver.FindElement(By.Name("pCode")).Text, Is.EqualTo("2a2 a2a"));

}

[Test]

public void sellYourVehicleInvalidInputPostalCodeWithoutWhiteSpaceBetweenPCode()

{

//Arrange

string baseURL = "http://localhost:8088/SellVehicle/";

//Act

driver.Navigate().GoToUrl(baseURL);

driver.Manage().Window.Size = new System.Drawing.Size(909, 710);

driver.FindElement(By.CssSelector(".btn")).Click();

driver.FindElement(By.Name("fName")).Click();

driver.FindElement(By.Name("fName")).SendKeys("Minsun");

driver.FindElement(By.Name("lName")).SendKeys("Park");

driver.FindElement(By.Name("address")).SendKeys("108 University Avenue West");

driver.FindElement(By.Name("city")).SendKeys("Waterloo");

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'BC']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'MB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NB']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NL']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'NS']")).Click();

}

{

var dropdown = driver.FindElement(By.Id("province"));

dropdown.FindElement(By.XPath("//option[. = 'ON']")).Click();

}

driver.FindElement(By.Name("pCode")).SendKeys("2N2N2N");

driver.FindElement(By.Name("pNumber")).SendKeys("555-555-5555");

driver.FindElement(By.Name("email")).SendKeys("abc@gmail.com");

driver.FindElement(By.Name("make")).SendKeys("BMW");

driver.FindElement(By.Name("model")).SendKeys("Z4");

driver.FindElement(By.Name("year")).SendKeys("2020");

driver.FindElement(By.CssSelector(".btn")).Click();

//Assert

Assert.That(driver.FindElement(By.Name("pCode")).Text, Is.EqualTo("2N2N2N"));

}

}

**Screenshots**

**Graphical user interface, text, application

Description automatically generated**