package com.cts.carstore;

import org.springframework.boot.SpringApplication;

import org.springframework.boot.autoconfigure.SpringBootApplication;

import org.springframework.context.annotation.ComponentScan;

import com.cts.carstore.skeletonvalidator.SkeletonValidator;

@SpringBootApplication

@ComponentScan("com.cts.\*")

public class CarStoreApplication {

public static void main(String[] args) {

SpringApplication.run(CarStoreApplication.class, args);

new SkeletonValidator();

}

}

package com.cts.carstore.controller;

import java.util.ArrayList;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Controller;

import org.springframework.ui.ModelMap;

import org.springframework.validation.BindingResult;

import org.springframework.validation.Validator;

import org.springframework.web.bind.annotation.ModelAttribute;

import org.springframework.web.bind.annotation.RequestMapping;

import org.springframework.web.bind.annotation.RequestMethod;

import com.cts.carstore.exception.ApplicationException;

import com.cts.carstore.model.CarSearch;

import com.cts.carstore.service.CarStoreService;

@Controller

public class CarStoreController {

@Autowired

private CarStoreService service;

@Autowired

private Validator validator;

public CarStoreController() {

System.out.println("in default constr of controller");

}

@Autowired

public CarStoreController(CarStoreService service, Validator validator) {

this.service=service;

this.validator=validator;

}

@RequestMapping(value = "/", method = RequestMethod.GET)

public String showCarSearchForm(@ModelAttribute("carSearch") CarSearch carSearch) {

//Add code here..

return "carSearch"; //TODO, modify return value

}

@RequestMapping(value = "/getCarSearchResultPage", method = RequestMethod.POST)

public String getCarSearchResultForm(@ModelAttribute("carSearch") CarSearch carSearch, ModelMap map,

BindingResult result)throws ApplicationException {

//Add code here..

// Redirecting to the same form page if invalid

if (result.hasErrors()) {

return "carSearch";

}

else {

return "carSearchResult"; //TODO, modify return value

}

}

@ModelAttribute("cityList")

public List<String> populateCities() {

List<String> cities = new ArrayList<String>();

cities.add("Chennai");

cities.add("Mumbai");

cities.add("Delhi");

cities.add("Bangalore");

cities.add("Pune");

cities.add("Kolkatta");

return cities;

}

@ModelAttribute("brandList")

public List<String> populateBrands() {

List<String> brands = new ArrayList<String>();

brands.add("Maruti Suzuki");

brands.add("Honda");

brands.add("Mahindra");

brands.add("Toyota");

brands.add("Hundai");

return brands;

}

@ModelAttribute("budgetList")

public List<String> populateBudget() {

List<String> budgetUpto = new ArrayList<String>();

budgetUpto.add("Below 3 Lakh");

budgetUpto.add("3 Lakh");

budgetUpto.add("5 Lakh");

budgetUpto.add("7 Lakh");

budgetUpto.add("10 Lakh");

return budgetUpto;

}

@ModelAttribute("fuelTypeList")

public List<String> populateFuelTypes() {

List<String> fuelTypes = new ArrayList<String>();

fuelTypes.add("Petrol");

fuelTypes.add("Diesel");

fuelTypes.add("CNG");

return fuelTypes;

}

}

**package** com.cts.carstore.exception;

**public** **class** ApplicationException **extends** Exception {

**private** **static** **final** **long** ***serialVersionUID*** = -9079454849611061074L;

**public** String errorMessage;

}

package com.cts.carstore.exception;

import java.util.Date;

import javax.servlet.http.HttpServletRequest;

import org.springframework.http.HttpStatus;

import org.springframework.ui.Model;

import org.springframework.web.bind.annotation.ControllerAdvice;

import org.springframework.web.bind.annotation.ResponseStatus;

import org.springframework.web.servlet.ModelAndView;

@ControllerAdvice

public class ExceptionHandlerControllerAdvice {

@ResponseStatus(value = HttpStatus.INTERNAL\_SERVER\_ERROR)

public ModelAndView handleResourceNotFound(final ApplicationException exception,

final HttpServletRequest request, final Model model) {

//Add code here..

String message="Low Budget- No car available below 3 lakh price";

Date date= new Date();

//add attribute error and timestamp

return null; //TODO, change return value

}

}

**package** com.cts.carstore.model;

**public** **class** Car {

**private** String brandName;

**private** String modelName;

**private** **double** price; //price in lakh

**private** String fuelType;

**private** **double** mileage;

**private** **int** seatingCapacity;

**public** Car() {

// **TODO** Auto-generated constructor stub

}

**public** Car(String brandName, String modelName, **double** price, String fuelType,**double** mileage, **int** seatingCapacity) {

**super**();

**this**.brandName = brandName;

**this**.modelName = modelName;

**this**.price = price;

**this**.fuelType = fuelType;

**this**.mileage = mileage;

**this**.seatingCapacity = seatingCapacity;

}

**public** String getBrandName() {

**return** brandName;

}

**public** **void** setBrandName(String brandName) {

**this**.brandName = brandName;

}

**public** String getModelName() {

**return** modelName;

}

**public** **void** setModelName(String modelName) {

**this**.modelName = modelName;

}

**public** **double** getPrice() {

**return** price;

}

**public** **void** setPrice(**double** price) {

**this**.price = price;

}

**public** String getFuelType() {

**return** fuelType;

}

**public** **void** setFuelType(String fuelType) {

**this**.fuelType = fuelType;

}

**public** **int** getSeatingCapacity() {

**return** seatingCapacity;

}

**public** **void** setSeatingCapacity(**int** seatingCapacity) {

**this**.seatingCapacity = seatingCapacity;

}

**public** **double** getMileage() {

**return** mileage;

}

**public** **void** setMileage(**double** mileage) {

**this**.mileage = mileage;

}

}

**package** com.cts.carstore.model;

**import** javax.validation.constraints.NotBlank;

**import** javax.validation.constraints.NotNull;

**import** javax.validation.constraints.Pattern;

**public** **class** CarSearch {

// Use validation annotations as per the requirement

@NotNull(message = "Customer name is required")

**private** String customerName;

@NotBlank(message = "Gender is required")

**private** String gender;

@NotBlank(message = "Mobile number is required")

@Pattern(regexp="([7,8,9]{1}[0-9]{9})",message="Mobile number should be 10 digit starting with 7,8,9")

**private** String mobileNumber;

**private** String customerCity;

**private** String brand;

**private** String budgetUpto;

**private** String fuelType;

**public** CarSearch() {

// **TODO** Auto-generated constructor stub

}

**public** String getCustomerName() {

**return** customerName;

}

**public** **void** setCustomerName(String customerName) {

**this**.customerName = customerName;

}

**public** String getGender() {

**return** gender;

}

**public** **void** setGender(String gender) {

**this**.gender = gender;

}

**public** String getMobileNumber() {

**return** mobileNumber;

}

**public** **void** setMobileNumber(String mobileNumber) {

**this**.mobileNumber = mobileNumber;

}

**public** String getCustomerCity() {

**return** customerCity;

}

**public** **void** setCustomerCity(String customerCity) {

**this**.customerCity = customerCity;

}

**public** String getBrand() {

**return** brand;

}

**public** **void** setBrand(String brand) {

**this**.brand = brand;

}

**public** String getBudgetUpto() {

**return** budgetUpto;

}

**public** **void** setBudgetUpto(String budgetUpto) {

**this**.budgetUpto = budgetUpto;

}

**public** String getFuelType() {

**return** fuelType;

}

**public** **void** setFuelType(String fuelType) {

**this**.fuelType = fuelType;

}

}

**package** com.cts.carstore.model;

**public** **class** ErrorResponse {

**private** String errorMessage;

**private** String requestedURI;

//add code here

}

package com.cts.carstore.service;

import java.util.ArrayList;

import java.util.List;

import org.springframework.stereotype.Service;

import com.cts.carstore.exception.ApplicationException;

import com.cts.carstore.model.Car;

import com.cts.carstore.model.CarSearch;

@Service

public class CarStoreService {

public List<Car> getCarSearchResult(CarSearch carSearch) throws ApplicationException {

//Add code here..

List<Car> l=buildCars();

List<Car> r=new ArrayList<>();

for(Car i:l) {

if(i.getBrandName().equals(carSearch.getBrand()) && i.getFuelType().equals(carSearch.getFuelType()) && i.getPrice()<=Double.parseDouble(carSearch.getBudgetUpto().substring(0, 1))) {

r.add(i);

}

}

return r; //TODO, modify this return value

}

// DO NOT CHANGE THIS METHOD

//DO NOT CHANGE CODE WITHIN METHOD

private List<Car> buildCars() {

List<Car> cars = new ArrayList<Car>();

// brand,modelName,price,fuelType,seatingCapacity

Car car1 = new Car("Maruti Suzuki", "Swift", 5.20, "Petrol", 21.21, 5);

Car car2 = new Car("Maruti Suzuki", "Alto", 3, "Petrol", 22.05, 5);

Car car3 = new Car("Maruti Suzuki", "Ertiga LXi", 7.5, "Petrol", 19.01, 7);

Car car4 = new Car("Maruti Suzuki", "Ertiga VXi", 8.9, "CNG", 26.2, 7);

Car car5 = new Car("Maruti Suzuki", "WagonR", 4.5, "Petrol", 20.52, 5);

Car car6 = new Car("Maruti Suzuki", "WagonR LXi", 5.20, "CNG", 32.52, 5);

Car car7 = new Car("Honda", "Amaze", 6.20, "Petrol", 18.6, 5);

Car car8 = new Car("Honda", "Amaze1.2E MT", 7.6, "Diesel", 24.7, 5);

Car car9 = new Car("Honda", "Amaze1.5E MT", 8, "Diesel", 25.2, 5);

Car car10 = new Car("Honda", "City", 9.30, "Petrol", 17.4, 5);

Car car11 = new Car("Mahindra", "KUV100", 5.6, "Petrol", 15, 6);

Car car12 = new Car("Toyota", "Yaris", 8.8, "Petrol", 18.1, 5);

Car car13 = new Car("Hundai", "Aura", 7.30, "CNG", 20.5, 5);

Car car14 = new Car("Hundai", "Creta", 9.9, "Petrol", 21.5, 5);

cars.add(car1);

cars.add(car2);

cars.add(car3);

cars.add(car4);

cars.add(car5);

cars.add(car6);

cars.add(car7);

cars.add(car8);

cars.add(car9);

cars.add(car10);

cars.add(car11);

cars.add(car12);

cars.add(car13);

cars.add(car14);

return cars;

}

}

package com.cts.carstore.skeletonvalidator;

import java.lang.reflect.Method;

import java.util.logging.Level;

import java.util.logging.Logger;

public class SkeletonValidator {

public SkeletonValidator() {

validateClassName("com.cts.carstore.model.Car");

validateClassName("com.cts.carstore.model.CarSearch");

validateClassName("com.cts.carstore.model.ErrorResponse");

validateClassName("com.cts.carstore.service.CarStoreService");

validateClassName("com.cts.carstore.controller.CarStoreController");

validateClassName("com.cts.carstore.exception.ApplicationException");

validateClassName("com.cts.carstore.exception.ExceptionHandlerControllerAdvice");

validateMethodSignature("getCarSearchResult:java.util.List",

"com.cts.carstore.service.CarStoreService");

validateMethodSignature("showCarSearchForm:java.lang.String,populateCities:java.util.List,populateBrands:java.util.List,populateBudget:java.util.List,populateFuelTypes:java.util.List",

"com.cts.carstore.controller.CarStoreController");

}

private static final Logger LOG = Logger.getLogger("SkeletonValidator");

protected final boolean validateClassName(String className) {

boolean iscorrect = false;

try {

Class.forName(className);

iscorrect = true;

LOG.info("Class Name " + className + " is correct");

} catch (ClassNotFoundException e) {

LOG.log(Level.SEVERE, "You have changed either the " + "class name/package. Use the correct package "

+ "and class name as provided in the skeleton");

} catch (Exception e) {

LOG.log(Level.SEVERE,

"There is an error in validating the " + "Class Name. Please manually verify that the "

+ "Class name is same as skeleton before uploading");

}

return iscorrect;

}

protected final void validateMethodSignature(String methodWithExcptn, String className) {

Class cls = null;

try {

String[] actualmethods = methodWithExcptn.split(",");

boolean errorFlag = false;

String[] methodSignature;

String methodName = null;

String returnType = null;

for (String singleMethod : actualmethods) {

boolean foundMethod = false;

methodSignature = singleMethod.split(":");

methodName = methodSignature[0];

returnType = methodSignature[1];

cls = Class.forName(className);

Method[] methods = cls.getMethods();

for (Method findMethod : methods) {

if (methodName.equals(findMethod.getName())) {

foundMethod = true;

if (!(findMethod.getReturnType().getName().equals(returnType))) {

errorFlag = true;

LOG.log(Level.SEVERE, " You have changed the " + "return type in '" + methodName

+ "' method. Please stick to the " + "skeleton provided");

} else {

LOG.info("Method signature of " + methodName + " is valid");

}

}

}

if (!foundMethod) {

errorFlag = true;

LOG.log(Level.SEVERE, " Unable to find the given public method " + methodName

+ ". Do not change the " + "given public method name. " + "Verify it with the skeleton");

}

}

if (!errorFlag) {

LOG.info("Method signature is valid");

}

} catch (Exception e) {

LOG.log(Level.SEVERE,

" There is an error in validating the " + "method structure. Please manually verify that the "

+ "Method signature is same as the skeleton before uploading");

}

}

}

server.port=3030

spring.mvc.view.prefix=/WEB-INF/views/

spring.mvc.view.suffix=.jsp

spring.mvc.static-class-path=/resources/\*\*

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<%@ taglib prefix=*"sf"* uri=*"http://www.springframework.org/tags/form"*%>

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<br>

<br>

<!-- Add code here.. -->

<h1 id=*"heading"*>Windsor Car Showroom</h1>

<table>

<center></center><caption style="font-weight: *bolder*;">Search Cars</caption></center>

<sf:form action=*"getCarSearchResultPage"* modelAttribute=*"carSearch"*

name=*"form"*>

<tr>

<td>Customer Name:</td>

<td><sf:input path=*"customerName"* id=*"customerName"* name=*"customerName"*/></td>

<td><sf:errors path=*"customerName"* /></td>

</tr>

<tr>

<td>Mobile Number:</td>

<td><sf:input path=*"mobileNumber"* id=*"mobileNumber"* /></td>

<td><sf:errors path=*"mobileNumber"* /></td>

</tr>

<tr>

<td>Gender:</td>

<td>

<sf:radiobutton path=*"gender"* value=*"male"*/>

<label class=*'radiolabel'*>Male</label>

<sf:radiobutton path=*"gender"* value=*"female"* />

<label class=*'radiolabel'*>Female</label> </td>

</tr>

<tr>

<tr>

<td>Customer City:</td>

<td><sf:select path=*"gender"* id=*"gender"* items=*"*${cityList}*"* /></td>

</tr>

<tr>

<tr>

<td>Brand:</td>

<td><sf:select path=*"gender"* id=*"gender"* items=*"*${brandList}*"* /></td>

</tr>

<tr>

<tr>

<td>Fuel/Transmission:</td>

<td><sf:select path=*"gender"* id=*"gender"* items=*"*${fuelTypeList}*"* /></td>

</tr>

<tr>

<tr>

<tr>

<td>Budget Upto:</td>

<td><sf:select path=*"gender"* id=*"gender"* items=*"*${budgetList}*"* /></td>

</tr>

<td><input type=*"submit"* value=*"CarSearch"* name=*"CarSearch"* /></td>

<td><input type=*"reset"* value=*"Clear"* /></td>

</tr>

</sf:form>

</table>

</body>

</html>

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"*%>

<%@ taglib prefix=*"spring"* uri=*"http://www.springframework.org/tags"*%>

<%@ taglib prefix=*"sf"* uri=*"http://www.springframework.org/tags/form"*%>

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

<!DOCTYPE html>

<html>

<head>

<meta charset=*"ISO-8859-1"*>

<title>Insert title here</title>

</head>

<body>

<br>

<br>

<!--Add code here -->

<br>

<br>

<h3>Here are cars matching your search criteria:</h3>

<table border=*"1"*>

<tr><td>Brand Name</td><td>Model Name</td><td>Price in lakh</td><td>Fuel/Transmission</td><td>Mileage</td><td>Seating Capacity</td></tr>

<c:forEach var=*"i"* items=*"*${list}*"*>

<tr><td><c:out value=*"*${i.getBrandName()}*"*/></td>

<td><c:out value=*"*${i.getModelName()}*"*/></td>

<td><c:out value=*"*${i.getPrice()}*"*/></td>

<td><c:out value=*"*${i.getFuelType()}*"*/></td>

<td><c:out value=*"*${i.getMileage()}*"*/></td>

<td><c:out value=*"*${i.getSeatingCapacity()}*"*/></td>

</tr>

</c:forEach>

</table>

</body>

</html>

<%@ page language=*"java"* contentType=*"text/html; charset=ISO-8859-1"*

pageEncoding=*"ISO-8859-1"* isELIgnored=*"false"* isErrorPage=*"true"*%>

<%@ taglib prefix=*"spring"* uri=*"http://www.springframework.org/tags"*%>

<%@ taglib prefix=*"sf"* uri=*"http://www.springframework.org/tags/form"*%>

<%@ taglib uri=*"http://www.springframework.org/tags/form"* prefix=*"form"*%>

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

<!DOCTYPE HTML>

<html>

<head>

<title>Car Search Errors</title>

</head>

<body>

<!--Add code here.. -->

<form:form id=*"error"*>

<h3>Unable to retrieve loan information. Below are the error details:</h3>

<h3>Response Code: ${code }</h3>

<h3>Error Message: ${message }</h3>

<h3>Error Occurred on: ${curtime }</h3>

</form:form>

</body>

</html>