**Exercise 4: Online Bookstore - Processing Request Body and Form Data**

import org.springframework.web.bind.annotation.\*;

import org.springframework.web.multipart.MultipartFile;

import java.util.ArrayList;

import java.util.List;

@RestController

@RequestMapping("/customers")

public class CustomerController {

private List<Customer> customers = new ArrayList<>();

// POST endpoint to create a new customer using JSON request body

@PostMapping("/json")

public Customer createCustomerFromJson(@RequestBody Customer newCustomer) {

customers.add(newCustomer);

return newCustomer;

}

// POST endpoint to process form data for customer registration

@PostMapping("/form")

public String createCustomerFromFormData(

@RequestParam("name") String name,

@RequestParam("email") String email,

@RequestParam("password") String password,

@RequestParam(value = "profilePicture", required = false) MultipartFile profilePicture) {

Customer newCustomer = new Customer(customers.size() + 1, name, email, password);

if (profilePicture != null) {

// Process the profile picture if provided

String fileName = profilePicture.getOriginalFilename();

// Save the file somewhere (not implemented in this example)

newCustomer.setProfilePicture(fileName);

}

customers.add(newCustomer);

return "Customer registered successfully!";

}

}

class Customer {

private int id;

private String name;

private String email;

private String password;

private String profilePicture;

// Constructors, getters, and setters

public Customer() {}

public Customer(int id, String name, String email, String password) {

this.id = id;

this.name = name;

this.email = email;

this.password = password;

}

public int getId() {

return id;

}

public void setId(int id) {

this.id = id;

}

public String getName() {

return name;

}

public void setName(String name) {

this.name = name;

}

public String getEmail() {

return email;

}

public void setEmail(String email) {

this.email = email;

}

public String getPassword() {

return password;

}

public void setPassword(String password) {

this.password = password;

}

public String getProfilePicture() {

return profilePicture;

}

public void setProfilePicture(String profilePicture) {

this.profilePicture = profilePicture;

}

}