## **SPRING ASSIGNMENT Day 7**

Harshit Kushmakar | 16896

Q1.

#### **User Class:**

```
package com.springcore;
import org.hibernate.validator.constraints.NotBlank;
import java.util.List;
public class User {
   private Integer userId ;
   @NotBlank (message = "Username cannot be
                                  @Pattern(regexp =
", message = "Invalid
   @NotBlank(message = "Password cannot be empty!!" )
@Size(min = 8 , message = "Password must be greater")
   @NotBlank(message = "Gender cannot be empty!!" )
private String gender;
   @Size (min = 2 , message = "Minimum hobbies selected
   private List<String> hobbies;
   private String preferredHolidayLocation;
    @Min(value = 18)
private Integer age;
```

```
static int count=100;
   public String getUserName() {
return userName;
    public void setUserName(String userName) {
this.userName = userName;
    public String getPassword() {
    public void setPassword(String password) {
this.password = password;
    public String getGender() {
   public void setGender(String gender) {
this.gender = gender;
   public List<String> getHobbies() {
   public void setHobbies(List<String> hobbies) {
this.hobbies = hobbies;
    public Integer getUserId() {
   public void setUserId(Integer count) {
   public Integer getAge() {
    public void setAge(Integer age) {
this.age = age;
    public String getPreferredHolidayLocation() {
```

```
public void setPreferredHolidayLocation(String
preferredHolidayLocation) {
```

```
preferredHolidayLocation;
    public String getDateOfBirth() {
return dateOfBirth;
    public void setDateOfBirth(String dateOfBirth) {
this.dateOfBirth = dateOfBirth;
    public User() {
        this.userId= count++;
    public User(String userName, String password, String
gender, List<String> hobbies, String
preferredHolidayLocation, Integer age, String
dateOfBirth) {
       this.userId= count++;
this.userName = userName;
this.password = password;
this.gender = gender;
this.hobbies = hobbies;
preferredHolidayLocation;
this.age = age;
        this.dateOfBirth = dateOfBirth;
    @Override
    public String toString() {
                ", dateOfBirth='" + dateOfBirth + '\'' +
```

### **User Controller Class:**

```
package com.springcore;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model; import
org.springframework.ui.ModelMap;
import org.springframework.validation.BindingResult;
import org.springframework.web.bind.annotation.*; import
org.springframework.web.servlet.ModelAndView;
import javax.validation.Valid; import
java.util.List;
@Controller
public class UserController {
```

```
hobby, preferredHolidayLocation,age.age(dob) , (String)
dateEditor.getValue());
```

```
@RequestMapping("/Form")
    public String showForm(Model theModel) {
theModel.addAttribute("user", new User());
    @RequestMapping(value = "/userForm", method =
RequestMethod. POST)
    public String processForm(@Valid
ModelMap model) {
        AgeCalculation ageCalculation = new
AgeCalculation();
int age =
ageCalculation.age(user.getDateOfBirth());
user.setAge(age);
        if (result.hasErrors() || age < 21) {</pre>
```

## AgeCalculation:

```
package com.springcore;
import java.time.LocalDate;

public class AgeCalculation {
    public int age(String date) {
        Integer currYear = LocalDate.now().getYear();
        Integer dobYear =

Integer.parseInt(date.substring(0, 4));
return currYear - dobYear;
    }
}
```

# index.jsp

```
<html>
<head>
        <title>User Registration</title>
</head>
<body>
<h1> User Registration Form </h1>
<a href='Form'> Click here </a>
</body>
</html>
```

# Login.jsp:

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

```
<html>
<head>
    <title>User Registration</title>
     <style>
        .error
            color: #ff0000;
font-weight: bold;
     </style>
</head>
<body>
<h1> User Registration Form </h1>
<form:form method="POST" action="userForm"</pre>
modelAttribute="user">
    User name: <form:input path="userName" />
    <form:errors path="userName" cssClass="error" />
<br><br><br>>
    Password : <form:password path="password" />
    <form:errors path="password" cssClass="error" />
<br><br><br>></pr>
    Gender:
    Male <form:radiobutton path="gender" value="Male"</pre>
    Female <form:radiobutton path="gender" value="Female"</pre>
    <form:errors path="gender" cssClass="error" />
<br><br><br>>
    Hobbies:
    Travelling <form:checkbox path="hobbies"</pre>
value="travelling"/><br><br>
    Sleeping <form:checkbox path="hobbies"</pre>
value="sleeping"/><br><br>
    Swimming <form:checkbox path="hobbies"</pre>
value="swimming"/>
    <form:errors path="hobbies" cssClass="error" />
<br/>br><br/>
    Preferred Holiday Location : <form:select</pre>
path="preferredHolidayLocation">
```

<form:op< th=""><th>tion</th><th></th><th></th><th></th></form:op<>	tion			
	value="Singapo	ore"> <th>option&gt;</th> <th></th>	option>	
<form:option< th=""><th></th><th></th><th></th><th></th></form:option<>				

## UserData.jsp:

```
<%@ page isELIgnored = "false" %>
<!DOCTYPE html>
<html>
   <head>
      <meta charset="ISO-8859-1">
      <title>User Data</title>
   </head>
   <body>
     <h3>User Details Submitted Successfully!!</h3>
     User Id:
            ${user.userId}
         User Name:
           $ {user.userName} 
         Your Password:
${user.password}
```

```
Gender:
        $ {user.gender} 
      Hobbies:
        ${user.hobbies}
      Preferred Holiday Location: 
        ${user.preferredHolidayLocation}
      Age:
        $ {user.age} 
      DateOfBirth:
        ${user.dateOfBirth}
      </html>
```

# Output:

Q2.

# Index.jsp

```
<html>
<body>
<h2><a href="customer/register">Click Here to Register the Customer</a></h2>
<h2><a href="customer/applyLoan">Click Here to Apply for Loan </a></h2>
<h2><a href="customer/search">Click Here to Search for Details</a></h2>
</body>
</html>
```

# Controller Class:

```
import javax.validation.Valid;
import com.springprj.dao.CustomerDAO;
import com.springprj.dao.LoanDAO; import
com.springprj.model.Customer; import
com.springprj.model.LoanAgreement;
import
org.springframework.beans.propertyeditors.CustomDateEdito
r;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.validation.BindingResult;
import org.springframework.web.bind.WebDataBinder;
import
org.springframework.web.bind.annotation.InitBinder;
import
org.springframework.web.bind.annotation.ModelAttribute;
import
org.springframework.web.bind.annotation.ModelAttribute;
import
org.springframework.web.bind.annotation.RequestMapping;
```

```
org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.servlet.ModelAndView;
import java.text.SimpleDateFormat;
@Controller
@RequestMapping("/customer")
public class ControllerClass {
    @InitBinder
   public void initBinder(WebDataBinder dataBinder) {
        SimpleDateFormat dateFormat = new
SimpleDateFormat("dd-MM-yyyy");
        dataBinder.registerCustomEditor(Date.class, new
CustomDateEditor(dateFormat, true));
    @RequestMapping("/register")
    public String showForm(Model theModel) {
theModel.addAttribute("customer", new Customer());
    @RequestMapping("/applyLoan")
    public String showApplyForm(Model theModel) {
        theModel.addAttribute("loan", new
LoanAgreement());
    @RequestMapping("/search")
    public String search(Model theModel) {
theModel.addAttribute("page", "display");
```



@Modtribute("customer") Customer customer,

```
BindingResult theBindingResult) {
if (theBindingResult.hasErrors()) {
            CustomerDAO customerDAO = new CustomerDAO();
customerDAO.save(customer);
    @RequestMapping("/processLoanForm")
public String processLoanForm(@Valid
@ModelAttribute("loan") LoanAgreement
loanAgreement, BindingResult theBindingResult) {
if (theBindingResult.hasErrors()) {
            LoanDAO loanDAO = new LoanDAO();
loanDAO.save(loanAgreement);
    @RequestMapping("/searchByCustomerCode")
public ModelAndView
searchByCustomerCode(@RequestParam("lesseeId")String id )
        LoanDAO loanDAO = new LoanDAO();
ModelAndView modelAndView = new
ModelAndView("display2");
        modelAndView.addObject("loan",loanData);
return modelAndView;
```

```
@RequestMapping("/searchByLoanId")
public ModelAndView
searchByLoanId(@RequestParam("agreementId") String id ) {
```

CustomerDAO

```
package com.springprj.dao;
import com.springprj.model.Customer;
import java.sql.*;
import java.text.ParseException;
import
java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Date; import
java.util.List;
public class CustomerDAO {
    private ArrayList<Customer> customers = new
ArrayList<>();
    Connection con = null;
    Statement stmt=null;
    public CustomerDAO() {
```

try {

```
Class.forName("oracle.jdbc.driver.OracleDriver");
con = DriverManager.getConnection(
            stmt = con.createStatement();
         catch (Exception e)
            e.printStackTrace();
Class.forName("oracle.jdbc.driver.OracleDriver");
            con = DriverManager.getConnection(
         catch (Exception e)
            e.printStackTrace();
   public void save(Customer c) {
conn();
            Date d = new SimpleDateFormat("yyyy-MM-
dd").parse(c.getDateOfBirth());
SimpleDateFormat("dd/MM/yyyy").format(d);
```

```
String s = "insert into Customer_16899
```

```
c.getFirstName() + "','"
                   + c.getLastName() + "', '" +
c.getGender() + "','" + sd + "','"
                   + c.getContactNumber() + "','"
+c.getEmailAddress() + "'," + c.getMonthlyIncome() + ",'"
                   + c.getProfession() + "', " +
c.getTotalMonthlyExpense() + ",'" + c.getDesignation() +
"','" +c.getCompanyName() +"')";
           stmt.execute(s);
        catch (SQLException e1) {
el.printStackTrace(); } catch
(ParseException e) {
new RuntimeException(e);
   public String
selectAll() { conn();
           PreparedStatement pstmt =
con.prepareStatement("select * from Customer 16899 ");
           ResultSet rs = pstmt.executeQuery();
           while (rs.next()) {
               customers.add((new
Customer(rs.getString(1), rs.getString(2),
rs.getString(3), rs.getString(4),
rs.getDate(5).toString(), rs.getString(6),
rs.getString(7), rs.getLong(8), rs.getString(9),
rs.getDouble(10), rs.getString(11), rs.getString(12))));
           if(customers.isEmpty()){
return "Data do not exist";
```

```
return customers.toString();
```

```
catch (SQLException e1) {
    public String getAllCustomers() {
selectAll();
       return customers.toString();
    public List<Customer> select(String id) {
        conn();
        ArrayList<Customer> customers1 = new
ArrayList<>();
           PreparedStatement pstmt =
con.prepareStatement("select * from Customer 16899 where
            pstmt.setString(1,id);
            ResultSet rs = pstmt.executeQuery();
            while (rs.next()) {
                customers1.add((new
Customer(rs.getString(1), rs.getString(2),
rs.getString(3), rs.getString(4),
rs.getDate(5).toString(), rs.getString(6),
```

```
rs.getString(7), rs.getLong(8), rs.getString(9),
rs.getDouble(10), rs.getString(11), rs.getString(12))));
```

}

```
return customers1;
         catch (SQLException e1) {
return new ArrayList<>();
    public String select1(String id) {
        conn();
        ArrayList<Customer> customers1 = new
ArrayList<>();
            PreparedStatement pstmt =
con.prepareStatement("select * from Customer 16899 where
            pstmt.setString(1,id);
            ResultSet rs = pstmt.executeQuery();
            while (rs.next()) {
Customer(rs.getString(1), rs.getString(2),
rs.getString(3), rs.getString(4),
rs.getDate(5).toString(), rs.getString(6),
rs.getString(7), rs.getLong(8), rs.getString(9),
rs.getDouble(10), rs.getString(11), rs.getString(12))));
            return customers1.toString();
```

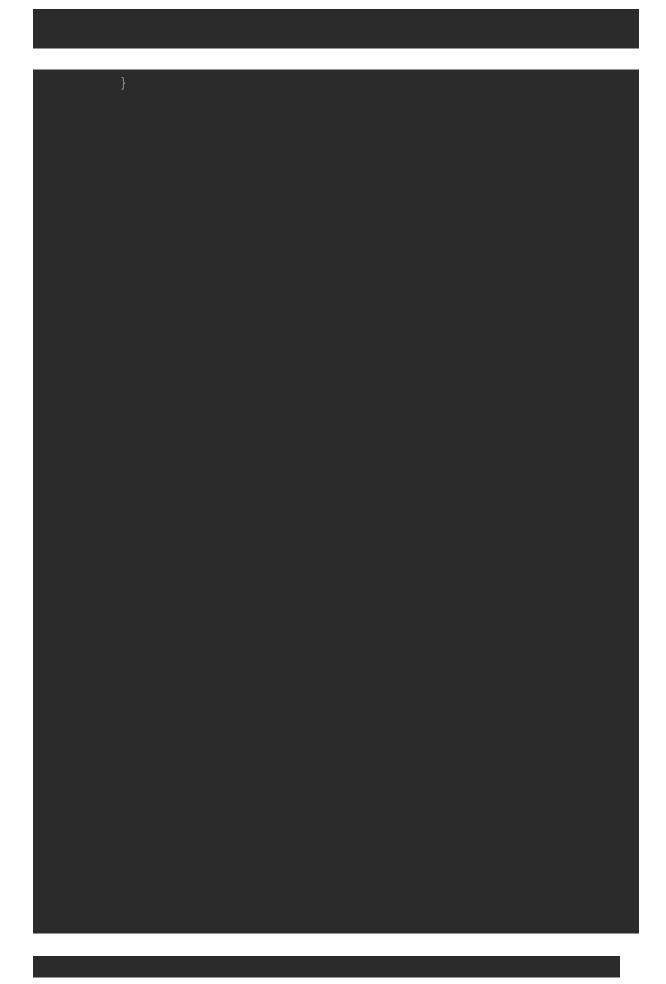
```
catch (SQLException e1) {
   return new ArrayList<>().toString();
```

```
public String delete(String id) {
   conn();
        PreparedStatement pstmt =
        pstmt.setString(1,id);
        ResultSet rs = pstmt.executeQuery();
        return selectAll();
    catch (SQLException e1) {
```

### LoanDAO

package com.springprj.dao;

```
import com.springprj.model.LoanAgreement;
import java.sql.*;
import java.text.ParseException;
java.text.SimpleDateFormat;
import java.util.ArrayList;
import java.util.Date;
public class LoanDAO {
    Connection con = null;
    Statement stmt=null;
    public LoanDAO() {
Class.forName("oracle.jdbc.driver.OracleDriver");
con = DriverManager.getConnection(
            stmt = con.createStatement();
         catch (Exception e)
            e.printStackTrace();
Class.forName("oracle.jdbc.driver.OracleDriver");
            con = DriverManager.getConnection(
            stmt = con.createStatement();
```



catch (Exception e) {

```
e.printStackTrace();
```

```
public int save(LoanAgreement e) {
           Date d = new SimpleDateFormat("yyyy-MM-
dd").parse(e.getLoanDisbursalDate());
            String sd = new
SimpleDateFormat("dd/MM/yyyy").format(d);
                   + e.getAgreementId() + "','" +
e.getLesseeId() + "',"
                   + e.getTenure() + "," + e.getRoi() +
"," + e.getLoanAmount() + ",'"
                    + e.getRepaymentFrequency() + "','"
+sd + "','" + e.getStatus() + "','"
                    + e.getProductCode() + "')";
            return stmt.executeUpdate(s);
        catch (SQLException | ParseException e1) {
e1.printStackTrace();
    public String select(String id) {
            ArrayList<Object> list = new ArrayList<>();
            PreparedStatement pstmt =
con.prepareStatement("select * from LoanAgreement 16899
           pstmt.setString(1,id);
```

ResultSet rs = pstmt.executeQuery();

```
while (rs.next()) {
list.add(rs.getString(1));
list.add(rs.getString(2));
list.add(rs.getInt(3));
list.add(rs.getDouble(4));
list.add(rs.getDouble(5));
list.add(rs.getString(6));
list.add(rs.getDate(7));
list.add(rs.getString(8));
list.add(rs.getString(9));
list.add(" n \sim n \sim n ");
            if(list.isEmpty()){
            return list.toString();
        catch (SQLException e1) {
    public String search(String id) {
            ArrayList<Object> list = new ArrayList<>();
            PreparedStatement pstmt =
con.prepareStatement("select Customer Id ,FirstName ,
            pstmt.setString(1,id);
```

### ResultSet rs = pstmt.executeQuery();

```
while (rs.next()) {
list.add(rs.getString(1));
list.add(rs.getString(2));
list.add(rs.getString(3));
}

if(list.isEmpty()) {
    return "Data do not exist";
}

return list.toString();

}

catch (SQLException e1)
{
e1.printStackTrace();
}

return "";
}
```

Register Customer.jsp

```
<%@ taglib prefix="form"
uri="http://www.springframework.org/tags/form" %>
<html>
<head>
<title>Customer Registration Form</title>

<style>
.error {
color: red;
}
</style>
</head></head></head>
```



```
<body>
<h1> Customer Registration Form</h1>
<i>Fill out the form. Asterisk (*) means required.</i>
<br><br><br>>
<form:form action="processCustomerForm"</pre>
modelAttribute="customer">
First name(*): <form:input path="firstName" />
<form:errors path="firstName" cssClass="error" />
<br><br><br>></pr>
Last Name: <form:input path="lastName" />
<form:errors path="lastName" cssClass="error" /> <br>
Gender(*) : Male: <form:radiobutton path="gender"</pre>
value="M" />
Female: <form:radiobutton path="gender" value="F" />
<form:errors path="gender" cssClass="error" /> <br><br>
Date of Birth : <form:input path="dateOfBirth"</pre>
type="date"/><br><br>
Contact Number(*): <form:input path="contactNumber" />
<form:errors path="contactNumber" cssClass="error" />
<br><br><br>></pr>
Email Address(*): <form:input path="emailAddress" />
<form:errors path="emailAddress" cssClass="error" />
<br><br><br>>
Monthly Income(*): <form:input path="monthlyIncome" />
<form:errors path="monthlyIncome" cssClass="error" />
<br><br><br>></pr>
Profession: <form:input path="profession" />
<form:errors path="profession" cssClass="error" />
<br><br><br>>
Total Monthly Expense(*): <form:input
path="totalMonthlyExpense" />
<form:errors path="totalMonthlyExpense" cssClass="error"</pre>
/> <br><br>>
Designation: <form:input path="designation" />
<form:errors path="designation" cssClass="error" />
<br><br><br>>
```

### ApplyLoan.jsp

```
<%@ taglib prefix="form"
<html>
<head>
<title>Customer Registration Form</title>
.error {
color: red;
</style>
</head>
<body>
<h1> Apply For Loan</h1>
<i>Fill out the form. Asterisk (*) means required.</i>
<br><br><br>></pr>
<form:form action="processLoanForm"</pre>
modelAttribute="loan">
Agreement ID(*): <form:input path="agreementId" />
<form:errors path="agreementId" cssClass="error" />
<br><br><br>>
Customer Id(*) : <form:input path="lesseeId" />
<form:errors path="lesseeId" cssClass="error" /> <br>
Tenure : <form:input path="tenure" />
```

```
<form:errors path="tenure" cssClass="error" /> <br><br>
Rate : <form:input path="roi" />
<form:errors path="roi" cssClass="error" /> <br><br>
Loan Amount : <form:input path="loanAmount" />
<form:errors path="loanAmount" cssClass="error" />
<br><br><
Repayment Frequency(*) : <form:input path="repaymentFrequency" />
<form:errors path="repaymentFrequency" cssClass="error"</pre>
/> <br><br>
loanDisbursalDate : <form:input path="loanDisbursalDate"</pre>
type="date"/><br><br>
Status(*) : <form:input path="status" />
<form:errors path="status" cssClass="error" /> <br>
Product Code(*) : <form:input path="productCode" />
<form:errors path="productCode" cssClass="error" />
<br><br><br>></pr>
<input type="submit" value="Apply" />
</form:form>
</body>
```

### Search.jsp

```
<h1>Search by Customer Code </h1>
<br><br><
<div>
<form action="searchByCustomerCode" >
    <label for="lesseeId">Customer Code </label><br>
    <input type="text" id ="lesseeId" name="lesseeId"</pre>
><br><br><
    <input type="submit" value="Search">
</form>
</div>
<br>
<hr>
<br>
<h1>Search by Loan ID </h1>
<br><br><br>></pr>
<div>
<form action="searchByLoanId" >
    <input type="text" id ="agreementId"</pre>
name="agreementId" ><br><br>
    <input type="submit" value="Search">
</form>
</div>
</body>
</html>
```

### Display.jsp:

```
<html>
<body>
<h2> Customer has successfully registered </h2>
</body>
</html>
```

### Display1.jsp

```
<html>
<body>
<h2> Applied for loan successfully!!! </h2>
</body>
</html>
```

### Display2.jsp

### Display3.jsp



## Click Here to Register the Customer

Click Here to Apply for Loan

Click Here to Search for Details

Applied for loan successfully!!!

/		$\alpha$	① III+0000/6-iD703//I-I	
	$\rightarrow$		<ul> <li>localhost:8080/SpringDay7Q2/customer/applyLoa</li> </ul>	n

# **Apply For Loan**

Fill out the form. Asterisk (\*) means required.

# Applied for loan successfully!!!

$\leftarrow$	$\rightarrow$	C	1	localhost:8080/SpringDay7Q2/customer/applyLoan	
--------------	---------------	---	---	--	--

# **Apply For Loan**

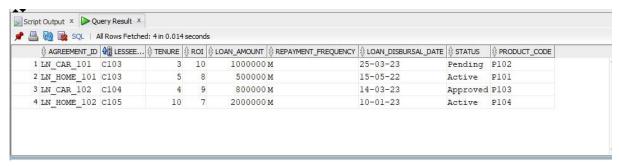
Fill out the form. Asterisk (*) means required.
Agreement ID(*): LN_CAR_102
Customer Id(*): C104
Tenure : 4
Rate: 9
Loan Amount : 800000
Repayment Frequency(*): M
loanDisbursalDate: 14-03-2023 🗊
Status(*): Approved
Product Code(*): P103
Apply

← C	
-----	--

# Applied for loan successfully!!!

← → C (i) localhost:8080/SpringDay7Q2/customer/applyLoan
Apply For Loan
Fill out the form. Asterisk (*) means required.
Agreement ID(*): LN_HOME_102
Customer Id(*): C105
Tenure: 10
Rate: 7
Loan Amount : 2000000
Repayment Frequency(*): M
loanDisbursalDate: 10-01-2023 🗊
Status(*): Active
Product Code(*): P104
Apply
← C ○ localhost:8080/SpringDay7Q2/customer/processLoanForm

# Applied for loan successfully!!!



### Search by Customer Code:



## **Search by Customer Code**

## Search by Loan ID



#### Loan Details as per Customer Code:

[LN\_CAR\_101, C103, 3, 10.0, 1000000.0, M, 2023-03-25, Pending, P102, ~~, LN\_HOME\_101, C103, 5, 8.0, 500000.0, M, 2022-05-15, Active, P101, ~~]

## Search by Loan ID:



# **Search by Customer Code**

Search	istomer Code		

# Search by Loan ID

Loan Id	
LN_HOME_101	
Search	