LAB 11: MVC framework

Lab Activities

Exercise 1: Creating a new project

Task 1: Create a new project for web application

a) Create the Employee Web application project with the following characteristic:
   Project: Employee
   Location: C:\Users\User\Documents\NetBeansProjects
   Folder: C:\Users\User\Documents\NetBeansProjects\ Employee
   Server : Personal glassfish
   Java EE version: Java EE 7
   Contextpath: /Employee

   index.jsp page is automatically created by default. In the index.jsp, create two links within the HTML tags as follow:

```
<a href="empform">Add Employee</a>
<a href="viewemp">View Employees</a>
```

Exercise 2: Creating a database and a table

Task 1: Start the Derby database. Create a emp database with following properties

   JDBC Driver : Java DB
   URL: jdbc:derby://localhost:1527/emp

   Username: app
   Password: app

Task 2: Create a table name staff

a) Add column to the staff table as follow:

Column Name	Data Type	Nullable	Default	Primary Key
ID	INTEGER	NO	-	1
NAME	VARCHAR	YES	-	-
SALARY	INTEGER	YES	-	-
DESIGNATION	VARCHAR	YES	-	-

b) Configure the Data source in the deployment descriptor
c) Configure the data source in the application server
   i.   Create the JDBC connection pool
   ii. Create a JDBC Datasource

Exercise 3: Creating model component – JavaBean

Task 1: Create JavaBean named `staff.java` as following:
- a) Open the Employee project
- b) Right-click on the **src** folder, select **New→Package**. Name it as **person.bean**.
- c) Right-click on the **person.bean** package, select **New→Class**. Name it **Staff** and click **Finish**.

Task 2: Edit the `staff.java` to Implement the `java.io.Serializable`. Perform the following:
- a) Add data member name, salary, designation
- b) Add constructor, get and set methods

Exercise 4: Creating view component - JSP

Task 1: Create a JSP to add new employee.
- a) Right click on the **WebPages** folder, select **New→JSP file**.
- b) Name it **empForm.jsp** and click **Finish**.
- c) Write a html form for adding new employee with the following:

Add New Employee

Name :	Sonoo Jaiswal
Salary :	85000
Designation :	Team Leader
	Save

- d) Write JSP/ JSTL code to insert the data from the form to the staff table in the emp database.

Task 2: Create a JSP to edit employee information.
- a) Create another JSP for `editForm.jsp`
- b) Write a html form for editing the employee information as below:

Edit Employee

Name :	Yash Tyagi
Salary :	35000.0
Designation :	Data Entry Operator
	Edit Save

- c) Write JSP/ JSTL code to edit the data from the form to the staff table in the emp database.

Exercise 5: Creating controller – Servlet

Task 1: Create a servlet that act as a controller.
- a) Right click on the **WebPages** folder, select **New→Servlet file**.
- b) Name it `empController.java` and write the url pattern as `emp.controller`. Then click **Finish.**
- c) The controller use method `request.getParamater()` to receive attribute values from the `empForm.jsp/ editForm.jsp`.

d) If the data is successfully added, perform a dispatch to the URL /success.jsp
e) If error occurs, perform a dispatch to the URL /error.jsp

Post Lab

Submit the Employee project as post lab 11.