

Assignment 3: In this assignment, we practice J2EE Database Programming using JSP/JSTL.**Part A)** Design the following Database /Table using *MySQL WorkBench*

- 1) Create a new database in MySQL .
 - Database Name : A3
- 2) Create a new Table in MySQL.
 - Table Name is **PRODUCT** which has the following structure:

ProductNo	ProductName	ProductType	Manufacturer	Price	Weight
Varchar(5), PrimaryKey	Varchar(25)	Varchar(25)	Varchar(25)	Decimal xxx.xx	Decimal xx.xx

Part B) Create a new Web Application and develop the following **JSP pages** to interact with a MySQL server (as demonstrated in class):

- 1) Develop the following JSP page (name it **Add-Product-Form.jsp**)

Product No:

Product Name:

Product Type
☒ Home Appliance ☐ Computer Hardware ☐ Game Console ☐ Clothing

Manufacturer:

Price:

Weight:

Add the proper tags which display the following message when user clicks on add product button:

The following information is received:

Product No is AB101

Product name is Washing Machine

Product type is Home Appliance

Manufacturer is LG

Price is 599.99

Weight is 32

- 2) Save **Add-Product-Form.jsp** as **Insert-records.jsp**, remove the EL commands for displaying the message and add the following functionality.
 - a. When user clicks on **Add Product** button, the program reads the form data and inserts them into the **PRODUCT** table using JSTL core and sql libraries.
 - b. The program perform form validation to ensure the Price range of each product is between \$100~\$900
 - c. The program will displays all existing records of **PRODUCT** in HTML table format.

***NOTE:** the page shouldn't insert any record until user press the **Add Product** button. However, when user opens the page, the form and the existing records can be displayed!*

- 3) Develop a JSP page (name it **Delete-Records**), which displays the following form and delete all related record from the **PRODUCT** table, using JSTL core and sql libraries. The program displays remaining records of **PRODUCT** in HTML table format below the "Delete the Product" button.

Part C) Open the *sample.jsp* file. Using your own word, explain the followings:

- How does this program work?
- What is the purpose of using `c:set`, `fmt:formatNumber`?

Part D) Develop a new JSP page using the following snippet:

```
<p> step 1: </p>
<%!int p=500; %>
<%=p %>
<p> step 2: </p>
<c:set var="q" value="600" />
<c:out value="{q}" />
<c:out value="{p}" />
<p> step 3: </p>
<p>{p} {q}</p>
```

- a) Using your own word, explain how this code works.
- b) You may notice that some of the expected values are not being displayed. Why? How to fix this issue? **You need to explain your answer in 60~100 words.**

Submission:

Take screenshot of the project in your IDE (the structure of files/libraries) and add some screenshot to show how the web application works. Save the screenshots in MS-Word file.

Submit the followings:

- 1) Submit the video recording.
- 2) Also submit
 - a. MS-word file (answer to the questions + screenshots)
 - b. The web application (ZIP format)
 - c. Export the database (.sql)