<u>Assignment 3:</u> 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),	Varchar(25)	Varchar(25)	Varchar(25)	Decimal	Decimal
PrimaryKey				XXX.XX	XX.XX

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

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

Product No: AB101				
Product Name: Washing Machine				
Product Type				
Home Appliance Computer Hardware Game Console Clothing				
Manufacturer: LG ▼				
Price: 599.99				
Weight: 32				
Add Product				

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 Applience

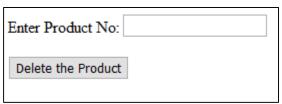
J2EE-Assignment3 Professor: Shahdad

```
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.isp* 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:

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

- 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)