

## PROG32758 Enterprise Java Development

**Fall 2023** (September 05, 2023 – December 15, 2023)

**Section P05** (1239-43808)

**Class:** Tuesday 8:00 am – 11:00 am (Davis J201) Thursday 8:00 am – 11:00 am (Davis J303)

### Assignment 3

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**Issue Date:** November 16, 2023

**Weight:** 4 %

**Max. Points:** 100

**Due Date: November 25, 2023 11:55 pm**

*(Late submissions with 10% penalty each day till November 28, 2023, 11:55 pm)*

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*Solution to the assignment problem should be developed using the concepts discussed in the class and the technologies used in the class examples.*

*A solution developed using concepts and technologies not discussed in the class will not be accepted for grading and grade zero will be given for the work.*

**No email submissions will be accepted.**

### Product Catalog Management Application

Company intends to develop a “Product Catalog Management Application”. The application should support features to

1. Add a new product to the database.
2. Edit/update a product in the database.
3. Delete a product from the database.
4. List the products of a given product brand.
5. List the products for which the quantity-in-hand is less than a given threshold.

For each product in the directory, product data includes *product code*, *product brand*, *quantity in hand*, and *product unit price*.

### Problem

Develop Java EE Web-based Product Catalog Management Application that supports the required features stated above.

### Requirements

The developed solution should

1. Be architected using MVC design pattern as 4-tier client server architecture.
2. Use H2 in-memory database server.
3. Use the form binding concept to get the product data input as an object.
4. Use Thymeleaf fragment to include footer on each webpage in the view with at least student number and student name.
5. Code the application using best coding practices.

### Submission

1. Please create a new Spring Boot project. Name the project as *lastNameFirstName-Assign3*, like *shafiqueMuhammad-Assign3*.
2. Develop the code for the designed solution for the application and test each link and input field for the required performance and completeness.

**3. Submit two documents: Zipped Spring Boot project and a word document with the webpages design for the application and the screenshots.**

4. For the design and the screenshots, create a new word document and name it as *lastNameFirstName-Assign3-design*. Enter your name, student number, and the date in the beginning of the document.
- Write the webpages design for the application.
  - Add the following screenshots to the document:
    - Run the application from Eclipse (i.e., Right click the project → Run As → Spring Boot App), take the console screenshot showing the port# of Apache Tomcat server where the Spring Boot framework has deployed the application. Use print screen (prt sc) button to take the screenshot and then paste the screenshot in the word document.  
**Note:** Please make sure that the screenshot shows the port# where the application is deployed.
    - Open a browser, type localhost:port# in the URL window of the browser, and hit return. It should show the first page of the application. Take a screenshot and paste to the word document.
    - Take screenshot of each web page of the application and paste to the word document.
    - Include the screenshot even if there is an error.
  - Save the word document.

Note: Please make sure that

- The URL window in the screenshot shows the port# from where the application is deployed.
  - The screenshots should not be edited.
5. Zip the project folder. Upload the .zip folder and the word document with the design and the screenshots to Assignment 3 folder in Assignments tab on SLATE.
- 6. Assignment 3 is due on Saturday November 25, 2023, 11:55 pm. However late submissions will be accepted till Tuesday November 28, 2023, 11:55 pm with 10% penalty for each day (including weekend and holidays).**
- 7. No email submissions will be accepted.**

### Assessment

Submitted work will be assessed for

		Max. points	Score	Comments
1	Architecture	15		
2	Add product	15		
3	Edit product	15		
4	Delete product	15		
5	Search by product brand	15		
6	Search by quantity-in-hand	15		
7	Completeness & quality	10		
	Total	100		

***Always stamp your work with excellence!***

(Assignment 3 developed by Dr. Muhammad Shafique: Wednesday, November 15, 2023)