Project 3 Specification

Faculty	Information Technology	Module Name	Advanced Java Programming
Module Code	ITAJA0/ ITAJ005	Project Number	3
Total Marks	100	Copy Editor	Sabrina Govender

This project contributes 25% towards the final mark.

Instructions to Student

1. All work, including draft notes, must be submitted with the completed project.
2. The program must be operational with as few faults as possible.
3. The pass mark is 60%.
4. 10% will be deducted for this project if it is handed back for resubmission.
5. 20% will be deducted if this project is handed back for resubmission due to plagiarism.

Resource Requirements

- The module learning material on myLMS may be referenced.

Delivery Requirements (evidence to be presented by students)

The project submission must include:

- Submission consists of a neatly formatted document containing the specified diagrams and documentation.
- Your name, student number, project number and date of submission must be included on the document's cover page.
- You may use the tool of your choice to create the UML diagrams.

Plagiarism and Referencing

Consult the section at the end of this document, which outlines how negative marking will be applied as well as the way in which it will affect the assignment mark.

Section A

Question 1   100 Marks

Study the scenario and complete the question(s) that follow:

Develop a distributed application that can be used as an online bookstore for the sales of books. The interface will be a website only. Users may be able to navigate through the online bookstore, select books, add to the shopping cart, and proceed to check out. An administrator login panel should allow the online store to add new books and view an inventory of all purchased and existing books. Considering that books can be of diverse themes, the online bookstore should have a book search functionality to help customers narrow down the book search.

Website

This project must be written in **JSPs and Servlets or using JSFs**, and should present the user with interfaces to satisfy the following needs:

- Clients must be able to navigate through the site home page, select books and add them to the shopping cart.
- Books should be viewable per category: all, fiction, politics, business, biography, children, and another non-fiction items. All books should have a name, id, picture image, description, and price information. You are advised to use the server filesystem instead of the database binary streams for your images.
- The *Home page* should have a search facility where book titles can be searched based on partial matches and categories.
- Once, a book is selected, the user must be able to move to a new page, where the number of units of the book can be selected prior to adding it to the shopping cart.
- A *shopping cart page* must be provided where all selected books can be viewed, with all pricing details before checking out.
- Once the books are checked out, the user must be redirected to a confirmation and thank-you page, displaying the order number of the customer. The payment and delivery facilities are not required for this proof-of-concept online bookstore.
- A log-on facility is required for admin users via a specific URL pattern (e.g., site-name/admin/).

- No sign-up or forgotten page is required, as admin users are given access by the database administrator.
- Admin users must be able to view all books in the database from the web page within the admin panel. A table layout presentation is recommended.
- Admin users must be able to view from the web page and within the admin panel an inventory of all purchased books including quantities per book and aggregated totals.
- Admin users should be able to add new books to the database from the web interface. All admin pages should only be accessible to admin users and when logged in.
- A logoff facility is required for the admin users to end their sessions.
- **Students are required to use Web services (JAX-RS/JAX-WS) to handle all database-related client HTTP requests.**

Database

The database **can be** created in **Microsoft SQL Server or MySQL**. The following information is required to be stored for use in the Web service and website:

- Book category, e.g., name, etc.
- Book information, e.g., name, ISNB, price, author details, publisher year, description, image location etc.
- Order information, e.g., id, order date
- Order details, e.g., order id, book id, quantity
- Admin User information provided when logging in, e.g., username, password, full name, etc.

Web service

The following functionality must be made available through the Web service:

User information additions/changes.
- Book information additions
- Order information additions
- Available stock update
- Any other functionality required by the website

End of Question 1

Section B

Plagiarism and Referencing

Eduvos places high importance on honesty in academic work submitted by students, and adopts a policy of zero tolerance on cheating and plagiarism. In academic writing, any source material e.g. journal articles, books, magazines, newspapers, reference material (dictionaries), online resources (websites, electronic journals or online newspaper articles), must be properly acknowledged. Failure to acknowledge such material is considered plagiarism; this is deemed an attempt to mislead and deceive the reader, and is unacceptable.

Eduvos adopts a zero tolerance policy on plagiarism, therefore, any submitted assessment that has been plagiarised will be subject to severe penalties. Students who are found guilty of plagiarism may be subject to disciplinary procedures and outcomes may include suspension from Eduvos or even expulsion. Therefore, students are strongly encouraged to familiarise themselves with referencing techniques for academic work. Students can access the Guide to Referencing on myLMS.

Negative Marking

- At the discretion of the marker, if a student has committed plagiarism, an immediate 0% will be awarded for the project and 10% will be deducted from their next submission.