

Enterprise Application Development (EAD)

Assignment 1

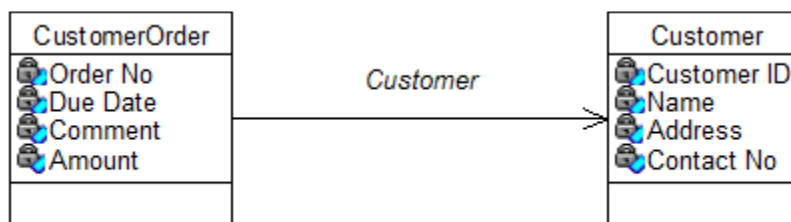
Issue Date : 17st July 2016

Due Date: 14th August 2016

In this assignment you are required to develop an Enterprise Application with Enterprise Java Beans using the NetBeans IDE. Note that you should attempt this by using the Java EE version 6.

DESCRIPTION

You are to produce an enterprise application which handles customer orders of a business organization. The enterprise application handling the customer orders should be simple as possible and it's sufficient that you implement it to the following basic design,



REQUIREMENTS

Make sure that the enterprise web application has the following Functional and Nonfunctional Requirements implemented.

Functional Requirements

- R1: The application shall allow the user to Manage Customers (add, edit, and remove Customers).
- R2: The Customer Orders shall always have only one valid Customer.
- R3: The application shall allow the user to add and update any of the Customer Orders, but it shall not allow removing any of the Customer Orders.
- R4: Creating a New Customer Order should be done in an asynchronous way so that the system resources are used only when it's needed. All other functionality of the applications should be executed synchronously

Nonfunctional Requirements

- NF1: Data should be persistent and must be saved in a Database.
Tip: Use the JavaDB which is bundled with NetBeans.
- NF2: The user should be provided with web clients to interact with the system. That is, the enterprise application should have web clients for user presentation and interaction.
Tip: Use standard Dynamic Web pages using Servlets or JSP to achieve this.

VIEWS

The user should be provided with some similar web clients as below,

List Customers

File Edit View Favorites Tools Help

★ Favorites

		Customer Id	Name	Address	Contact No
Update	Remove	1000	Shore To Shore Solutions	E P Z Katunayake	0112945458
Update	Remove	2000	MH Developments (pvt) Ltd	108, Flower Road, Colombo 03	0112356984
Update	Remove	4000	Cola Mineral Water	104C, Main Street, Colombo 01	0112458963

[Add new Customer](#)

List Customer Orders

<div> <div>File Edit View Favorites Tools Help</div> <div> <div>★ Favorites</div> <div>Servlet ListCustomerOrders</div> <div></div> </div> </div>						
	Order No	Customer Id	Customer Name	Amount	Due Date	Comments
Update	AB1891	1000	Shore To Shore Solutions	45,000	22/12/2009	Last delivery was cancelled due to bad packaging. need to be extra cautious this time
Update	UT1900	4000	Cola Mineral Water	15,200	10/11/2009	Deliver through DHL
Update	UT1901	4000	Cola Mineral Water	14,500	15/10/2009	
Update	CF3001	2000	MH Developments (pvt) Ltd	16,200	15/10/2009	Customer will pick the goods

Add or Update Customers

The screenshot shows a web browser window with the title bar 'Servlet Customer'. The address bar shows 'Servlet ListCustomers'. The page contains the following form fields and buttons:

- Customer Id:** A text input field.
- Name:** A text input field.
- Address:** A text input field with a vertical scrollbar.
- Contact No:** A text input field.
- Buttons:** 'Add Customer' and 'Update Customer'.

Add or Update Customer Orders

The screenshot shows a web browser window with the title bar 'Servlet CustomerOrder'. The address bar shows 'Servlet CustomerOrder'. The page contains the following form fields and buttons:

- Order No:** A text input field.
- Customer Id:** A text input field.
- Amount:** A text input field.
- Due Date:** A text input field.
- Comments:** A text input field with a vertical scrollbar.
- Buttons:** 'Add Customer Order' and 'Update Customer Orders'.

View Customer Order

File Edit View Favorites Tools Help

★ Favorites Servlet ViewCustomerOrder

Order No:
AB1891

Customer Id:
1000

Customer Name:
Shore To Shore Solutions

Amount:
45,000

Due Date:
22/12/2009

Comments:
Last delivery was cancelled due to
bad packaging, need to be extra
cautious this time

Note, the above client views are samples and you are free to decide and design similar suitable client views. **More marks will be given if you have designed a more user-friendly and easy to use user interfaces.**

Also make sure that you have a main web page (starter page of the application) which has links to the main web clients.

DELIVERABLES

- The **Use Case Diagram** and the **complete Class Diagram**.
- Well documented source code on a zipped file (NetBeans project folder would do – but please remember to clean the project before you submit)

- The NetBeans project should be able to be open the application when the project file is Build and Run.

(If there are any pre-steps then provide those steps **clearly** to make the project file build and run)

- Brief description of the implementation code.
(Only the implementation which is significant enough to be explained should be described. **Do not describe trivial things.**)
- Include a softcopy of the report with the zipped file. No Hard Copies required.
- It's not required to include the program code listing in the report. If there are any significant code snippets then you may describe it in your main report.

Upload the zipped file to the Course Web and it should contain the following,

- A. NetBeans project folder.
- B. If necessary, any clear instructions to run the NetBeans project.
- C. Softcopy of your report.

Indicative Mark Scheme

- Use Case Diagram and the complete Class Diagram – 10 Marks
- Design/Implementation (includes sensible use of design patterns, selection and use of enterprise beans, selection and use of Servlet, general OOD methodology, and how many requirements met) – 50 Marks
- Code (understandability and maintainability) – 10 Marks
- User Interface and Usability – 20 Marks
- Description of the code – 10 Marks

END OF DOCUMENT
