UNIVERSITY OF BUEA

Faculty of Engineering and Technology

Department Of Computer Engineering

CEF 502 Java 2 Enterprise Edition Project

EJB Tutorial Assignment

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Overview of Tutorial

EJB stands for Enterprise Java Beans. EJB is an essential part of a J2EE platform. This tutorial is to provide a comprehensive understanding about the EJB concepts helpful to create and deploy an enterprise level application up and running. J2EE platform has component based architecture to provide multi-tiered, distributed and highly transactional features to enterprise level applications. EJB provides an architecture to develop and deploy component based enterprise applications considering robustness, high scalability, and high performance. An EJB application can be deployed on any of the application server compliant with the J2EE standard specification.

Definition of Folder Structure

The folder structure is divided into the different exercises in the tutorial. Each chapter of the tutorial has an exercise to follow so, following that order is how the content of my folder is displayed.

- The EjbComponent folder consist of libraries with the different ejb projects. These files can be used only when the EjbComponent is deployed.
- The EjbTester contains the tester file for the ejbcomponent created above which is there to interface the client to obtain the user interface which asks for inputs from the user depending on the file structure. Taking the EjbModuleTester, when we run it, an interface prompts to the user and asks the user to enter 2 choices ie 1 and 2. the user enters 1, the system asks for book name and saves the book using stateful session bean addBook() method. If he enters 2, system retrieves books using stateful session bean getBooks() method and exits.

- The last folder is the Web Service client folder contains the WebServiceClientEjb file. EJB provides an option to expose session EJB as a web-service.

For the ejb persistence, you will need a postgres sql database in which you create a database for the books and a table to hold the books items.

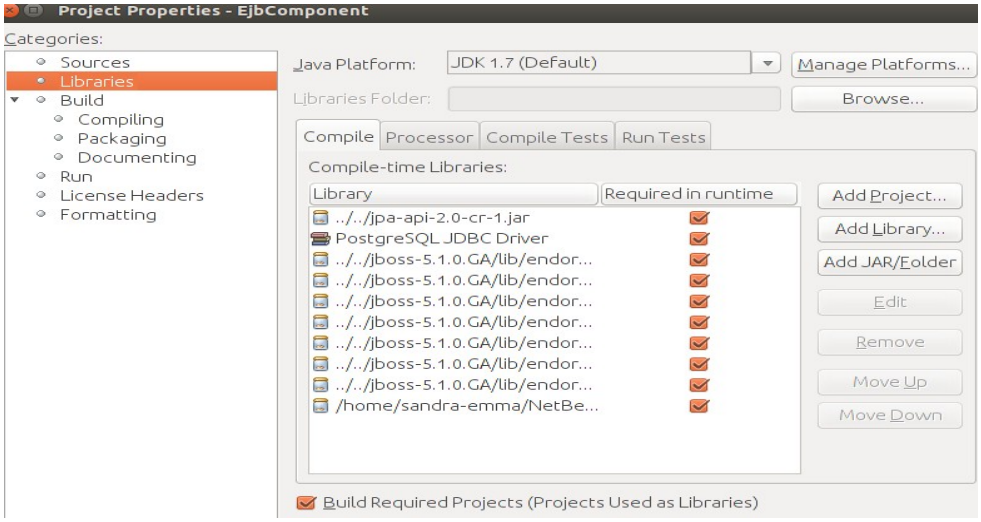
Requirements to run the program

The requirements on for the running of the program goes as follows.

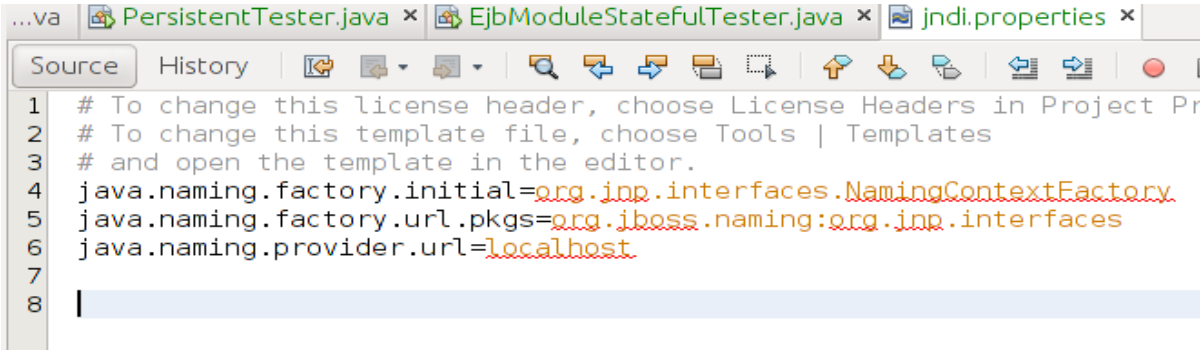
- NetBeans 7.4 IDE.
- Jboss server version 5.1.0.GA
- Postgres SQL database.
- OS of your choice that can support NetBeans and postgres installations.

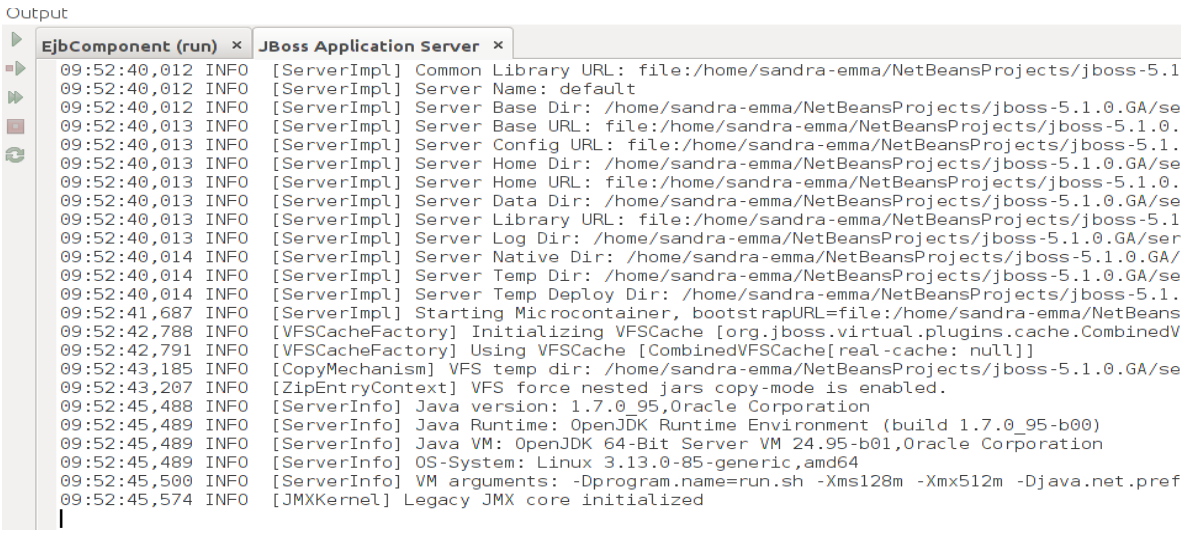
Setting Up and Running the projects

To run the program, start your IDE, configure the server to prostgres and all its preset configurations then you need to import all the different project folders into the IDE specified above. Change the default configurations of the EjbComponent by right clicking on it and select **properties → libraries**, use **addjar/folder** to add the various jar files and add project to add the projects we are working on. Build and clean to make sure there is no error in the project imported.

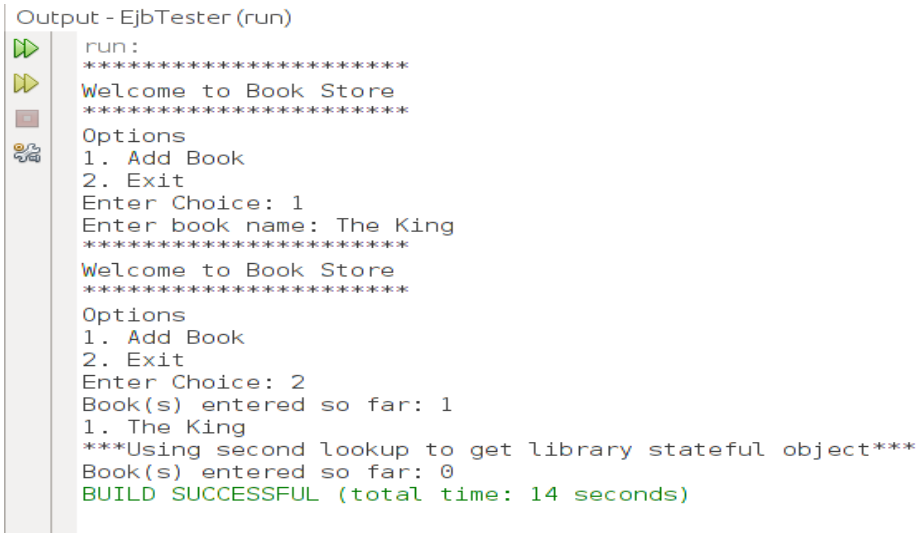


Also remove the libraries specified and add them back according to the ones given following your postgres installation path. When done, clean and build it to verify that no errors are in the code. Do the same thing for the EjbTester and WebServiceClientEjb then you clean and build them. With that done, you can now deploy the EjbComponent by right clicking on it and select **deploy** to deploy the module on the server. Under the jboss server tab, take note of the line containing jndi, it has the necessary details you need for the lookup in your client application.





This process will automatically start the jboss server which was not running. This is the type of output you are supposed to have when you deploy the program. Once the deployment is successful, you can then proceed to the EjbTester and run the various files by right clicking on each and select **run file**. This will run each file and provide the required outputs as per the tutorial, also the running of this files will automatically create the database's tables in which items inserted will be stored. This prevents the user from creating the database tables.



Once all of this is completed, then You're done.

Conclusion

Following the tutorial, I was able to create the different projects and running them gave a successful output for each project. This tutorial gives a hands on approach on learning EJB and the objectives of these were met.

Contact information for issues reporting

In case of any issues with the code, report to this address

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