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Advanced Java Programming

Technical Design Document

# Project Overview

My final project for Advanced Java Programming is a User Management Web Application. The objective of this application is to demonstrate my knowledge of topics covered in this course. The application is self has 5 basic functions:

1. New user registration
2. Registered user login
3. Password reset / changing password after login
4. Session/Profile Information View
5. User logout

# Technical Specifications

This application was designed using a Windows 10 PC with NetBeans IDE 8.2. The application was tested to successfully run using the GlassFish 3.1.2.2 server. A database was used for storing account information in the application. Specifically, a Derby DB was used in conjunction with JDBC to allow the application to communicate with and make changes to the database.

# Configuration Guide

To configure the database, the sample provided by GlassFish may be used to store the necessary table. To configure the JDBC driver, make sure to have a JDBC Connection Pool created with the following properties, shown in *figure 1*. The Resource Type should say javax.sql.DataSource.

Graphical user interface, application

Description automatically generated

Figure 1

Additionally, a JDBC Resource will also need to be created to connect to the Connection Pool. The JNDI name should start with jdbc/ and then whatever you would like to name it after the slash. The Pool Name category should show the name of the pool we created above.

Next, we will need to create a new Accounts table in our database to store the username and password information of our web application. Use the following SQL command to create the necessary table within the sample Derby database:

**CREATE TABLE ACCOUNTS (USERNAME VARCHAR(30), PASSWORD VARCHAR(30));**

Now our database should be ready to use with the User Management Web Application. If NetBeans, GlassFish, and Derby + JDBC are all configured properly, then anyone should be able to successfully test this application.