

1. Create new derby database called *OzFlora* with username and password *fit5042*.
2. Clean and build all 4 projects.
3. Deploy the enterprise application (do not run, just deploy) to Glassfish server 4.1.1.
4. Once tables are created, run the *InsertDefaultData.sql* script to load default plants data.
5. Create a new admin user by running the *CreateAdmin.sql* script. This will create an admin user with email *admin@example.com* and password *Fit5042*.
6. Open Glassfish server admin console.
7. Under Configurations > server-config > Security > Realms, create a new jdbc realm with the following settings:

**Realm Name:** jdbc-realm

**Class Name:** com.sun.enterprise.security.auth.realm.jdbc.JDBCRealm

#### Properties specific to this Class

<b>JAAS Context: *</b>	<input type="text" value="jdbcRealm"/> Identifier for the login module to use for this realm
<b>JNDI: *</b>	<input type="text" value="jdbc/OzFlora"/> JNDI name of the JDBC resource used by this realm
<b>User Table: *</b>	<input type="text" value="users"/> Name of the database table that contains the list of authorized users for this realm
<b>User Name Column: *</b>	<input type="text" value="email"/> Name of the column in the user table that contains the list of user names
<b>Password Column: *</b>	<input type="text" value="password"/> Name of the column in the user table that contains the user passwords
<b>Group Table: *</b>	<input type="text" value="user_groups"/> Name of the database table that contains the list of groups for this realm
<b>Group Table User Name Column:</b>	<input type="text" value="email"/> Name of the column in the user group table that contains the list of groups for this realm
<b>Group Name Column: *</b>	<input type="text" value="groupname"/> Name of the column in the group table that contains the list of group names
<b>Password Encryption Algorithm: *</b>	<input type="text" value="none"/> This denotes the algorithm for encrypting the passwords in the database. It is a security risk to leave this field empty.
<b>Assign Groups:</b>	<input type="text"/> Comma-separated list of group names
<b>Database User:</b>	<input type="text"/> Specify the database user name in the realm instead of the JDBC connection pool
<b>Database Password:</b>	<input type="text"/> Specify the database password in the realm instead of the JDBC connection pool
<b>Digest Algorithm:</b>	<input type="text" value="SHA-256"/> Digest algorithm (default is SHA-256); note that the default was MD5 in GlassFish versions prior to 3.1
<b>Encoding:</b>	<input type="text" value="Base64"/> Encoding (allowed values are Hex and Base64)
<b>Charset:</b>	<input type="text"/>

8. Once the realm is saved, it should be possible to start the enterprise application with user login and registration.