CS3431: SQLJ / Oracle Programming Instruction

1 Setup

Put the following lines into your .cshrc file on ccc. This will set up both Oracle and SQLJ environment.

```
setenv ORACLE_BASE /usr/local/oracle/app/oracle
setenv ORACLE_HOME ${ORACLE_BASE}/product/9.2.0.1
setenv PATH ${PATH}:${ORACLE_HOME}/bin
setenv ORACLE_SID cs
setenv TWO_TASK ${ORACLE_SID}
setenv CLASSPATH .
setenv CLASSPATH ${CLASSPATH}:${ORACLE_HOME}/jdbc/lib/ojdbc14.jar
setenv CLASSPATH ${CLASSPATH}:${ORACLE_HOME}/sqlj/lib/translator.jar
setenv CLASSPATH ${CLASSPATH}:${ORACLE_HOME}/sqlj/lib/runtime12.jar
```

2 Write SQLJ Code

Below is **sample.sqlj** code:

```
import java.sql.*;
import sqlj.runtime.*;
import sqlj.runtime.ref.*;
import oracle.sqlj.runtime.*;

public class sample
{

   public static void main (String args[]) throws SQLException {

      DefaultContext cx1 =
            Oracle.getConnection("jdbc:oracle:thin:@oracle.wpi.edu:1521:cs",
                        "user","passwd",true); // Auto Commit = true;
      DefaultContext.setDefaultContext(cx1);

      // Assume Table employees(empnumber int, age int);
      // Insert some data
      try {
        #sql { insert into employees values(4, 25) };
      } catch (SQLException e) {
            System.out.println("SQL Insert 1 fail. \n"+e);
            return;
      }
```

```
        try {
          #sql { insert into employees values(3, 35) };
        } catch (SQLException e) {
              System.out.println("SQL Insert 2 fail."+e);
              return;
        }

       // Query table

        #sql iterator Age(int age); // Result data set;
        Age result_age = null;
        int id = 5;
        try {
           #sql result_age = { select age
                               from    employees
                               where empnumber < :id};    // Using parameters
        } catch (SQLException e) {
              System.out.println("SQL fail."+e);
              return;
           }

        while(result_age.next()) // Fetch each result tuple;
           System.out.println("\n    Age    = " + result_age.age());
    }

}
```

Compile: **sqlj sample.sqlj**
Execute: **java sample**

3 Other Resources

https://www.wpi.edu/Academics/CCC/Services/Databases/SqlJ/
http://www.csee.umbc.edu/help/oracle8/java.815/a64685/samapp6.htm