

Motet Project Data Migration CIS4301

04-07-05

It has come to our attention that many of you are still having trouble with data migration using the sample.xls to populate the database. The data migration step was intended to provide you the experience of working with real industrial data. However, it was not intended to give you a difficult time or to take up the whole project implementation time. Since there is only 1 week until the project presentation, we would like for you to be able to focus your work on other more important aspects of the project such as web application functionality/module implementation and testing. We would like for everyone to be able to move forward with their projects. Therefore, we have agreed to provide this instruction and sql loader scripts for you to populate your database. This means that each group must follow this instruction and use the provided bulk loader scripts to populate your database. This would ensure that all groups have the same data in their database, and it would also help your project presentation and the grading process to proceed smoothly.

For those groups who have worked on and already completed part or all of the migration process, you will need to present proof of your migration work (i.e. porting scripts, etc.) to receive respective credit for your work on this migration process. You will need to make sure that your schema is compatible with the scripts. This means that your attributes must have the same name as specified in the scripts. Once you run the scripts, it will replace your existing data if any. Therefore, you do not need to drop or delete your tables.

For those groups who have not worked on the migration process, and therefore do not have proof of their work, you will not get credit for this part of the project. However, you will use the provided scripts and move on. This way, you will have more time to work on other parts of the project. If you have available time at the end, you can then try to work on the migration process and provide proof of your work for credit.

All proofs of migration work if any must be presented at the end of your presentation.

Once again, EVERY GROUP MUST FOLLOW THE INSTRUCTION AND USE THE PROVIDED SCRIPTS TO POPULATE YOUR DATABASE. WE WILL USE THIS DATA AS A BASIS FOR OUR GRADING. FAILURE TO FOLLOW THIS INSTRUCTION WILL SEVERELY IMPACT YOU PROJECT GRADE.

Before you start with the following instruction, you must have your oracle account and created your relation schemas in the database according to the logical design document. If you already have an existing schema, you may need to alter your schema so that it is compatible with one another (same attribute names). Note that some attribute/relation names need to be changed due to conflict with Oracle reserved keywords. These include "e-mail", "order", "comment", "view", and "date" which are changed to "email", "order_in_source", "comments", "views", and "print_date" respectively.

There were also mistakes in the relation schema with regards to the foreign key constraints in Image and Modification. The foreign keys for Image should be:

```
FOREIGN KEY (sigla) REFERENCES Source(sigla) ON DELETE CASCADE,  
FOREIGN KEY (par_order, motet_id) REFERENCES Par(par_order, motet_id)  
ON DELETE CASCADE
```

The foreign keys for Modification should be:

```
FOREIGN KEY (admin_id) REFERENCES Admin(user_id),  
FOREIGN KEY (sigla) REFERENCES Source(sigla) ON DELETE CASCADE,  
FOREIGN KEY (motet_id) REFERENCES Motet(id) ON DELETE CASCADE,  
FOREIGN KEY (par_order, motet_id) REFERENCES Par(par_order, motet_id)  
ON DELETE CASCADE);
```

Populating the database:

Please refer to Dr. Hammer's help page at

<http://www.cise.ufl.edu/~jhammer/classes/Oracle/index.html>

for Oracle Bulk Loader detail.

1. Download the "bulkloader.zip" file, extract it to a directory in you CISE account.
2. Check your database schema for attribute naming consistency. Compare your attribute names with the attribute name in each corresponding script. You can issue the following command to view your database schema:

```
SQL> desc <table_name>;
```

<table_name> is the name of your table that you want to view its schema.

If the attribute name in your schema is different from the script, you need to alter your table by dropping the column and add a new one. Here how you can do this:

```
SQL> ALTER TABLE <table_name> DROP COLUMN <attr_name>;
```

```
SQL> ALTER TABLE <table_name> ADD (<new_attr_name> <attr_type>);
```

3. The scripts will overwrite existing data if there is any. You can run the scripts as follow:

```
sqlldr <your_name>@orcl control=<script_filename> log=log.txt bad=bad.txt
```

<your_name> is the user name for your oracle account.

<script_filename> is the file name of the scripts(control files) that you extracted from the zip file. It has the extension ".ctl".

Due to referential integrity constraints specified in foreign key constraints, you need to run the scripts in the following order:

users.ctl
admin.ctl
registeredUser.ctl
region.ctl
source.ctl
manuscript.ctl
printed_book.ctl
motet.ctl
par.ctl
occurs.ctl

For each script that you run, you need to check the log.txt file and make sure that all records are loaded successfully. If there is any error, fix it and re-run the script again without the need to drop table. The scripts are confirmed to be free of errors. So any error that may occurs is due to consistency problem between your schema and the data. These scripts will populate the corresponding 10 relations for you. You may need to insert a few tuples in other relations on your own.

4. Once you finished loading the data, you can issue queries to verify that it is in your database so that you can use it for your application development.

Any question, e-mail Reasey at rpraing@cise.ufl.edu Hope this helps.